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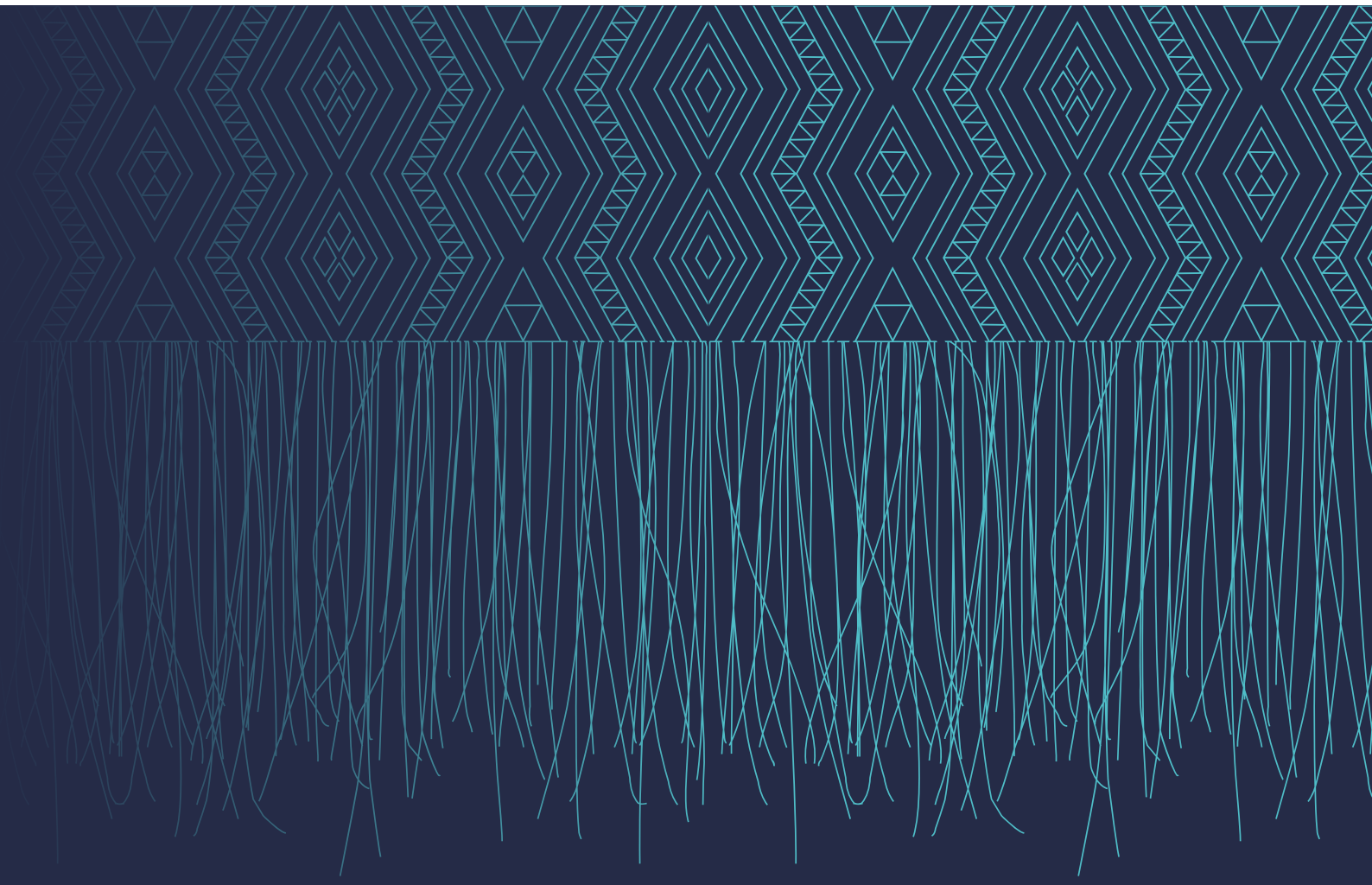
PAEREWA PĀRONGO HAUORA

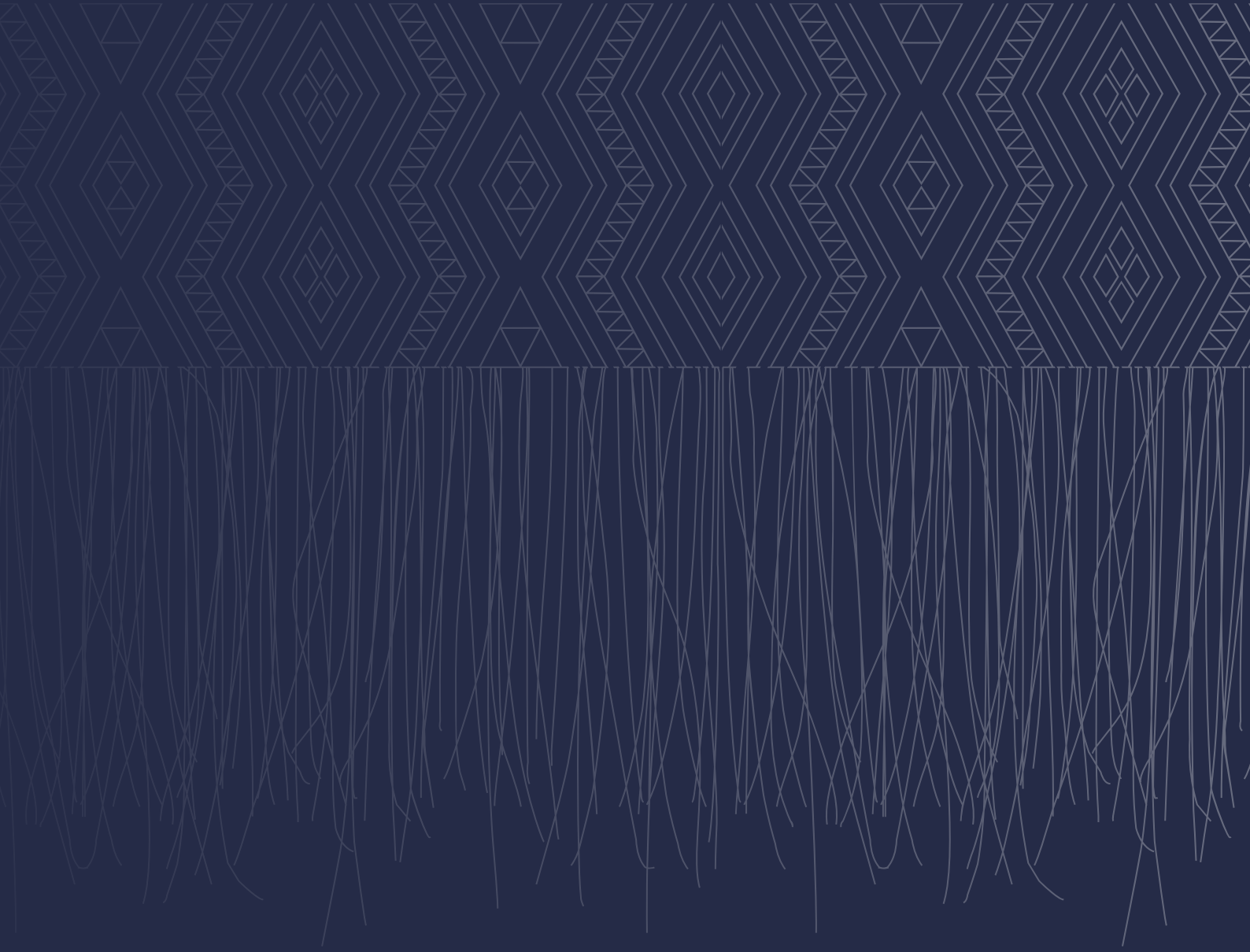
National Screening Unit

Health New Zealand
Te Whatu Ora

Cervical Screening Data and Messaging Standard HISO 10097:2024

July 2024





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Health New Zealand
Te Whatu Ora

Contents – Rārāngi Upoko

1. Purpose

This standard defines the data set that laboratories and clinics contracted to perform National Cervical Screening Programme (NCSP) laboratory and colposcopy services need to capture for cervical screening and submit to the National Screening Solution (NSS) via the National Cervical Screening Register (NCSP Register).

Data submitted to NSS will support the monitoring, operation and quality of the NCSP, and may also be used for research and education purposes.

These data definitions are based on:

- recognised population screening priorities
- consensus between represented stakeholders
- once-only data collection (and agreed responsibility)
- source data based on robust definitions
- acceptable impact or burden on services
- collection with appropriate frequency and timeliness.

This document also supports the development of messaging applications using HL7® version 2 (HL7 v2) by defining the message types that clinical systems need to submit cervical screening data into the National Screening Solution (NSS).

Laboratories and colposcopy clinics with contracts to perform NCSP laboratory and colposcopy services must provide electronic messages in line with this implementation guide. Laboratories cannot provide notification of HPV, cytology or histology results to the NSS through any other electronic or manual mechanism.

2. Scope

This standard defines the cervical screening data set required to be sent to the NSS to support the National Screening Programme and guidance for the HL7 version 2.4[R] (HL7 2.4) messages to be used.

For HL7 2.4 messaging this guide covers the following topics:

- Specific use of message segments where there are alternative uses and the enforcement of optional fields that are required for the NCSP Register.
- Description of the web services used to exchange HL7 messages with the NCSP Register.
- Provision of all the technical information required for a health provider (or their system vendor) to make all the necessary system changes to support the NCSP web services.

Out of scope

The standard does not define:

- the data sent from the laboratory to the physician responsible for the participant's care
- the file layouts for sending data using an alternative media source – this is no longer a requirement for the new NCSP Register
- business processes for exchanging information between laboratories/ colposcopy clinics, or any other entities such as hospitals and clinics.

2.1 Note on SNOMED CT and HL7 FHIR

SNOMED CT is the required terminology standard for all new applications, but an antecedent version of SNOMED is also referenced in this document. This version of SNOMED (SNOMED 3.5) was published in 1998 and is no longer supported nor recommended for use. Future updates of this standard will include the latest release of the SNOMED CT New Zealand Edition. Until the standard is updated, SNOMED 3.5 is to be used to support reporting into the NSS.

This document refers to HISO 10011.2 Referrals, Status and Discharges Messaging Standard. The Referrals, Status and Discharges documents are marked as 'contained' standards and not suitable for new uses. For the purposes of this implementation guide, these standards still apply because the cervical screening solution is built on the existing HL7 v2 messaging infrastructure used by laboratories and other screening solutions. The direction going forward is to use HL7 FHIR for all new systems including messaging infrastructure for screening.

3. Background

The NCSP is delivered by many providers across the screening pathway, from health information to cervical screening and treatment services. The NCSP was established in 1990 to reduce the incidence and mortality rate of cervical cancer through a nationwide ongoing organised screening programme that would detect pre-cancerous changes to the cervix.

The scope of the NCSP includes health promotion, smear-taking services including recall and referral, laboratory services including reading of all cervical cytology and histology samples and HPV testing, colposcopy services including biopsy and treatment of pre-cancerous lesions, national management and coordination, regional coordination, information management, and evaluation.

Since the NCSP began in 1990, the incidence of cervical cancer has decreased by about 50%. In 2017 the incidence of cervical cancer was 6.1 per 100,000 women.

From September 2023, the primary test for cervical screening changed from cytology (testing the cells of the vagina or cervix) to human papillomavirus (HPV) testing, with the option of self-testing.

The National Cervical Screening Programme Register (NCSP-R) has been in operation since 2008. The NCSP-R is no longer fit for purpose and cannot be enhanced to support the changes to the clinical pathway. The new NCSP information technology system (NSS) will enable easy management of the new cervical screening pathway; including supporting planning and management of participants, monitoring safety and quality, and enabling ongoing evaluation of the programme. The NSS will also have integrations with other data sources, such as the National Health Index (NHI) and Health Provider Index (HPI) and will be able to support future operating model changes for the NCSP as well. The NSS is a long-term strategic solution that can be extended to support future population health initiatives (and already supports the National Bowel Screening Programme).

This document provides a more detailed technical specification of the messaging structures that will need to be implemented in laboratory and colposcopy systems to exchange data with the new Cervical Screening Register on the NSS.

Laboratories and colposcopy services performing NCSP services must update their information systems to ensure that they can capture the data specified in this standard.

3.1 Legislation and regulations

The following Acts of Parliament and Regulations are relevant to this standard:

- Health Act 1956
- Health and Disability Commissioner (Code of Health and Disability Services Consumers' Rights) Regulations 1996
- Health Information Privacy Code 2020
- Health Practitioners Competence Assurance Act 2003
- Pae Ora (Healthy Futures) Act 2022
- Privacy Act 2020
- Public Records Act 2005
- Health (Retention of Health Information) Regulations 1996.

Readers must consider other Acts and regulations and any amendments that are relevant to their own organisation when implementing or using this standard.

3.1.1 Supporting Te Pae Tata

Te Pae Tata | interim New Zealand Health Plan 2022 (Te Pae Tata) sets out the first two years of action for Health New Zealand | Te Whatu Ora and Te Aka Whai Ora – Maori Health Authority as healthcare is transformed in Aotearoa New Zealand. Te Pae Tata outlines the first steps to build the foundations of a sustainable, affordable and unified health system that better serves all the people and communities of Aotearoa.

The Cervical Screening Data and Messaging Standard will support a key goal of Te Pae Tata **to prevent illness and support good health and wellbeing for all New Zealanders, no matter where they live**. It will do this by providing a key preventative health service, the National Cervical Screening Programme, supported by a modern, highly-functioning, well-regulated and reliable ICT system enabling a population-based health approach.

Another of the priorities of Te Pae Tata is to develop greater use of digital services to provide more care in homes and communities. High-quality and consistent cervical screening information that can be shared between primary care providers, laboratories and tertiary health providers will support the provision of cervical screening services and improve health outcomes.

3.2 Related specifications

The following have been referred to in the development of this standard.

3.2.1 Bethesda 2014

Bethesda 2014 is the endorsed system for reporting cervical cytologic diagnoses used for reporting HPV and cytology results. It is the standard for clinical information systems and electronic health records in New Zealand to communicate the HPV and cytology results by the labs.

While historic results may contain reference to the Bethesda 2001 codes, all new HPV and Cytology test results (and updates to historical HPV and Cytology test results) that are sent to the NSS must use the Bethesda 2014 codes.

3.2.2 Colposcopy standards

The Clinical Practice Guidelines for Cervical Screening in Aotearoa New Zealand (June 2023) (Section 5: Colposcopy) are a part of the NCSP Policies and Standards, which document the agreed policies, standards and guidelines for providers of National Cervical Screening Programme services. The Colposcopy Standards include data requirements for colposcopy, and these form an input into this standard.

3.2.3 Other specifications

Other specifications used in developing this standard, or referenced in its operation, offer additional clarification if needed. These are:

- HISO 10045 Health Provider Identity Standard (draft). For a copy of this draft standard, please send an email to **standards@health.govt.nz**
- **HISO 10046 Consumer Health Identity Standard**
- **HISO 10008 Pathology and Radiology Messaging Implementation Guide**
- **HISO 10008 Pathology and Radiology Messaging Standard**
- HISO 10011.2 Referral, Status and Discharges Messaging Standard
- Health Level Seven Inc., HL7 version 2.4 – An Application Protocol For Electronic Data Exchange in Healthcare Environments. This is the document referred to in the text as "HL7 version 2.4".
- **National Cervical Screening Programme. SNOMED Coding for Histology, Jan 2013** (Note: This will be phased out over time).

Organisations submitting to or receiving information from the NSS must comply with the following security and privacy standards:

- **HISO 10029:2022 Health Information Security Framework (HISF).**
- **HISO 10064 Health Information Governance Guidelines.**

3.3 Revision history

UPDATED	DETAILS
17 March 2014	The National Cervical Screening Programme Register Implementation Guide was published by the National Screening Unit to support the collection of cervical screening data.
2024	Updated to include HPV testing and reporting into the National Screening Solution.

3.4 Data element template

Data element specifications are presented in the following templated form based on publicly available standard ISO/IEC 11179 Information Technology – Metadata Registries (MDR).

Name	Data element name
Definition	A statement that expresses the essential nature of the data element
Source standards	Established standards or guidelines pertaining to the data element
Value domain	The named, enumerated or bounded set of valid values or codes that are acceptable for the data element Each coded data element has a specified code set The value domain may simply be a data type, with or without bound constraints
Data type	Data type and precision associated with the value domain: • Boolean • String • Date • Date/time • Integer • Decimal
Layout	The formatted arrangement of characters with 'A' for alpha, N for numeric and X for alphanumeric, eg: • X(50) for a 50-character alphanumeric string • NNN for a 3-digit number
Obligation	Indicates if the data element is mandatory, recommended, optional or conditional A recommended data element is not a mandatory requirement Conditional means use of the data element depends on the context
Guide for use	Additional guidance to inform the use of the data element, including verification rules
Verification rules	Included when required

3.4.1 SNOMED CT

SNOMED CT is the endorsed terminology standard for clinical information systems and electronic health records in New Zealand. SNOMED CT is developed by SNOMED International, of which New Zealand is a member country.

Read about the SNOMED National Release Centre here: https://www.tewhatuora.govt.nz/our-health-system/digital-health/snomed-ct-national-release-centre/

For coded data elements using SNOMED CT, the concepts making up each value domain are denoted by the preferred term and can be found on either the **SNOMED CT browser** or the **New Zealand Health Terminology Service**.

The **SNOMED CT NZ Edition**, incorporating the SNOMED CT International Edition, is released in April and October every year.

Where a data element in this standard uses SNOMED CT, the display is to show the agreed SNOMED concept term or synonym to the user and record the correct SNOMED CT identifier. Active SNOMED CT concepts must be selected when determining values for data elements. See the **SNOMED CT Search and Data Entry Guide** for a guide to building a user-friendly search across the terminology.

Note: Where a SNOMED code has not been provided in this standard, either a suitable code does not currently exist or code choices for the particular domain are still under development and will be added at a later date. These entries are indicated by 'To be advised' (TBA) in this standard.

3.4.2 Character sets

Text data elements must accommodate macrons for te reo Māori and diacritic characters for other commonly used languages. By default, this means using the Unicode Basic Latin, Latin-1 Supplement and Latin Extended A character sets.

ISO/IEC 10646:2017 Information technology – Universal Coded Character Set (UCS) is the recognised standard. UTF-8 is the recommended character encoding.

Alphabetic and alphanumeric codes and identifiers are restricted to printable Basic Latin characters.

3.4.3 Date and time value domain

As the date/time value domain is used many times in this document, its specification is stated once here.

Name	Date/time
Definition	The date and time for the associated data element
Source standards	ISO 8601-1:2019 Date and time. Representations for information interchange – Part 1: Basic rules
Value domain	Valid date (and time) where full date (and time) is specified
Data type	Date/time
Layout	YYYYMMDD[HHMM[SS]]
Obligation	Refer to the obligation for the associated data element. The time portion is optional for timestamp data elements in ORU messages. The time portion is mandatory for timestamp data elements in RSD messages.
Guide for use	

4. Common data elements

This section describes the data set that laboratories and colposcopy clinics need to send to the NSS for use by the NCSP. The messages sent to the NSS are in addition to and different from result or RSD messages that laboratories and colposcopy clinics already send to requesting physicians and sample takers.

The following segments are common across both messages from laboratories (ORU Messages) and colposcopy clinics (REF).

4.1 Participant identification

The following lists the participant's identity data elements, the content and format definitions of which are set out in HISO 10046 Consumer Health Identity Standard (see section **3.2 Related specifications**).

This information is available to registered health providers and includes demographic and other generic information.

Consumer Health Identity Standard data elements:

- Name
- NHI number/identifier
- Date of birth
- Ethnicity
- Person address

For participant information, the above data elements are to be reported in the relevant HL7 2.4 PID segments. See **PID Patient Identification**.

4.1.1 Participant's sex

The biological sex assigned to the participant. The NSS does not require this information from laboratories. Providing this detail is optional.

A review of the categories for capturing sex-related details is currently underway by Health New Zealand | Te Whatu Ora. Future updates will reflect the outcome of this review.

4.2 Health provider information

This section specifies information for registered health providers that should only be obtained from the HPI system. The information is mandatory.

4.2.1 HPI Common Person Number

The Common Person Number (CPN) identifies an individual person.

Name	HPI – CPN
Definition	A unique six-character identifier assigned by the HPI system to an individual person
Source standards	
Value domain	Valid CPN only
Data type	String
Layout	NCAAAA
Obligation	Mandatory, except for registrars (students) and dental assistants
Guide for use	Only the HPI system generates a new unique CPN which is the primary key for person records. This CPN is not re-used once assigned. Where more than one CPN exists for a single person, one CPN is declared 'live' and all other CPNs are made 'dormant' and attached to the live record. A Modulus 11 routine is used to produce the identifier check digit.

4.3 Observation request

The following identifies the common data elements required for observation requests:

- Placer order number
- Filler order number
- Collector ID
- Specimen received date
- Ordering provider
- When report released.

For details of the relevant OBR messaging details, refer to section 12.10 OBR – Observation Request.

4.3.1 When report released

This is the date and time when the laboratory report was released to the NSS. The time component is to be provided where possible. See 3.4.3 Date and time value domain for the format of this field. This date is to be reported in OBR-22 – Results Report/Status Change – Date/Time.

5. HPV test results

5.1 HPV report

The following details what is required for each specimen in an HPV report.

- Universal service ID
- Diagnostic service selector ID
- HPV reporting details

Each report relates to one specimen.

The following data elements will identify that an ORU message sent to the NCSP Register is an HPV result.

Table 1: HPV Reporting Details

DATA ELEMENT	FIELD	CARDINALITY	SEG/FIELD
Universal Service ID	OBR-4	1	11481-9^HPV Test Result^LN
Diagnostic Service Selector ID	OBR-24	1	OTH

5.2 HPV results

Each report relates to one specimen. The following details the information to be included when submitting HPV results.

- Date specimen collected
- Preparation technique / specimen type
- HPV test type
- HPV detection status
- HPV type
- Recommendation
- LBC product type

The general structure of cervical HPV reports follows the OBX segments in the table below. The LOINC codes to be used in OBX-3, Observation Identifier, are as listed in the HPV Observation Codes table:

Table 2: HPV Observation Codes

OBX-2 VALUE TYPE	OBX-3 – OBSERVATION IDENTIFIER			DATA STANDARD REFERENCE
	CODE	LOINC NAME	CODING SYSTEM	
CE	19772-3	Preparation Technique / Specimen Type	LN	Used for 5.2.2 Preparation technique / specimen type and used for 5.2.7 LBC product type
CE	19773-1	Recommendation	LN	Used for 5.2.6 Recommendation
CE	8100-0	Specimen Preparation	LN	Used for 5.2.3 HPV test type
CE	XNZ5552	HPV Detection Status	NZPOCS	Used for 5.2.4 HPV detection status
CE	XNZ5554	HPV Type	NZPOCS	Used for 5.2.5 HPV type

5.2.1 Date specimen collected

This is the date and time the specimen was collected and is reported in OBR-7 – Observation Date/Time. See 3.5.3 Date and time value domain for the format of this field.

The date the specimen was collected must be less than or equal to the current date and time.

5.2.2 Preparation technique / specimen type

<table>
<tr><td>Name</td><td>Preparation technique or specimen type</td></tr>
<tr><td>Definition</td><td>This field is used to describe the preparation technique or specimen type.</td></tr>
<tr><td>Source standards</td><td></td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>Bethesda 2014 Code</th><th>Description</th></tr>
<tr><td>LBC</td><td>Liquid based cytology</td></tr>
<tr><td>SWB</td><td>Swab taken</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The preparation technique/specimen type is reported in the OBX-5.
The acceptable values for preparation technique/specimen type are contained in the table above and are reported in OBX-5.
Note: Several collection methods are included in the code ‘LBC’:
• Both Spatula and Cytobrush
• Cytobrush
• Spatula
• Spatula and Cervix Broom
• Cervix Broom
• Other
• Unknown</td></tr>
<tr><td>Verification rule</td><td>A maximum of one preparation technique / specimen type is to be reported.</td></tr>
</table>

5.2.3 HPV test type

<table>
<tr><td>Name</td><td>HPV test type</td></tr>
<tr><td>Definition</td><td>This field is used to describe the HPV test technology used by the lab.</td></tr>
<tr><td>Source standards</td><td></td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>Code (99NZHPVTYP)</th><th>Commercial Preparation</th></tr>
<tr><td>DGHC2</td><td>Digene HC2</td></tr>
<tr><td>AMPCR</td><td>Amplicor HPV PCR</td></tr>
<tr><td>ABTRT</td><td>Abbott RealTime High Risk HPV</td></tr>
<tr><td>ABAL</td><td>Abbott Alinity m</td></tr>
<tr><td>CBS48</td><td>Roche COBAS 4800 HPV</td></tr>
<tr><td>CBS68</td><td>Roche COBAS 6800 HPV</td></tr>
<tr><td>CBS88</td><td>Roche COBAS 8800 HPV</td></tr>
<tr><td>RHLAY</td><td>Roche Linear Array HPV</td></tr>
<tr><td>BDONC</td><td>BD Onclarity</td></tr>
<tr><td>CEPXP</td><td>Cepheid Xpert HPV</td></tr>
<tr><td>APT</td><td>Aptima HPV</td></tr>
<tr><td>SGA</td><td>Seegene Anyplex II HPV Detection</td></tr>
<tr><td>OTHER</td><td>Other</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>A(5)</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The acceptable values for HPV test type are contained in the table above and are reported in OBX-5.</td></tr>
<tr><td>Verification rule</td><td>A maximum of one HPV test type must be reported.</td></tr>
</table>

5.2.4 HPV detection status

<table>
<tr><td>Name</td><td>HPV detection status</td></tr>
<tr><td>Definition</td><td>This field is used to report the HPV Detection Status.</td></tr>
<tr><td>Source standards</td><td></td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>Code (99NZHPVDT)</th><th>Descriptor</th></tr>
<tr><td>ND</td><td>HPV: Not detected</td></tr>
<tr><td>D</td><td>HPV: Detected</td></tr>
<tr><td>UNS</td><td>HPV: Unsuitable for analysis</td></tr>
<tr><td>INV</td><td>HPV: Invalid</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The HPV Detection Status is reported in OBX 5.</td></tr>
<tr><td>Verification rule</td><td>A maximum of one HPV detection status must be reported.</td></tr>
</table>

5.2.5 HPV type

Name	HPV type
Definition	This field is used to describe the specific HPV types identified (if known).
Source standards	
Value domain	

99NZHPVST Code	Description
16	HPV Detected: HPV-16
18	HPV Detected: HPV-18
31	HPV Detected: HPV-31
33	HPV Detected: HPV-33
35	HPV Detected: HPV-35
39	HPV Detected: HPV-39
45	HPV Detected: HPV-45
51	HPV Detected: HPV-51
52	HPV Detected: HPV-52
56	HPV Detected: HPV-56
58	HPV Detected: HPV-58
59	HPV Detected: HPV-59
66	HPV Detected: HPV-66
68	HPV Detected: HPV-68
ONC1	Onclarity Group 1: HPV-33/58
ONC2	Onclarity Group 2: HPV-56/59/66
ONC3	Onclarity Group 3: HPV-35/39/68
ALA	Alinity Group A: HPV-31/33/52/58
ALB	Alinity Group B: HPV-35/39/51/56/59/66/68
Other	HPV Detected: HPV-Other

Data type	String
Layout	X(5)
Obligation	Mandatory. The type/s detected must be provided if a response to 6.2.4 HPV detection status is D (HPV: Detected), otherwise it is optional.
Guide for use	The HPV type is reported in the OBX-5.

5.2.6 Recommendation

Name	Recommendation
Definition	This field is used to define the recommendation codes to accompany HPV test results.
Source standards	Bethesda 2014

Value domain

Code	Description
H1	The next HPV screening test should be taken in five years, based on the NCSP Register history.
H2	The next HPV screening test should be taken in three years because of the clinical history of immune deficiency.
H3	Please repeat the liquid-based cytology (LBC) sample for cytology in 6 to 12 weeks.
H4	Please repeat the HPV test. No delay before repeat testing is needed.
H5	Please repeat the HPV test in 12 months. A clinician-taken liquid-based cytology (LBC) sample is recommended as cytology may also be indicated.
H6	Please recall for a liquid-based cytology (LBC) sample in 6 to 12 weeks so that the HPV test and cytology can both be repeated.
H7	Please recall now for a clinician-taken liquid-based cytology (LBC) sample, as cytology is indicated.
H8	Referral for specialist colposcopy assessment is indicated.
H9	Referral for specialist gynaecology assessment is indicated.
H10	Urgent referral for colposcopy assessment is indicated.
H11	Urgent referral for specialist gynaecology assessment is indicated.
H12	Referral for colposcopy is indicated. A clinician-taken LBC sample for cytology prior to colposcopy is recommended.
H13	Under specialist care.
H14	Currently blank – field included for future proofing.
H15	HPV testing and cytology (Test of Cure) are indicated in 12 months. A clinician-taken liquid-based cytology (LBC) sample is required.
H16	Please recall now for a clinician-taken liquid-based cytology (LBC) sample for cytology as this is required for a Test of Cure.
H17	Annual co-test screening (an LBC sample for cytology and HPV testing) is indicated because of the history of a previous HPV-negative high-grade cervical or vaginal lesion, or a history of AIS where the HPV status prior to treatment is unknown.
H18	No further cervical or vaginal screening tests are indicated. HPV testing or cervical/vaginal cytology should only be requested if clinically indicated.

Code	Description
H19	Currently blank – field included for future proofing.
H20	Please manage this result in the clinical context in which it was taken. The result will be recorded on the NCSP Register but in view of the participant's age, the result will not be followed up by the NCSP Register.
H21	Please recall in three years for an HPV primary screening test, or in 12 months if the screening participant is immune deficient.
AD1	The clinical history of postmenopausal bleeding is noted. Specialist gynaecology referral may be indicated. Please follow your local health pathways for further assessment and referral criteria.
AD2	The clinical history of abnormal bleeding is noted. Specialist gynaecology referral may be indicated. Please follow your local health pathways for further assessment and referral criteria.
AD3	The clinical history of an abnormal-appearing cervix is noted. Specialist colposcopy referral may be indicated. Please follow your local health pathways for further assessment and referral criteria.
AD4	The clinical history of a disorder or medication that could be immune suppressive is noted. The recommendation in this report will need to be revised if the screening participant is immune deficient.
AD5	HPV testing has not been performed because the liquid-based cytology (LBC) vial / HPV collection tube was leaking on receipt in the laboratory. Please ensure that sample lids are securely fastened.
AD6	This sample was processed for cytology as well as HPV testing because a Test of Cure is indicated, based on the NCSP history.
AD7	As previous screening test results have been withdrawn from the NCSP Register, this recommendation is based on current test results only, and may need to be modified if previous tests have been performed.
AD8	Overseas tests are noted on the request form but are not recorded in the NCSP Register. This recommendation is based on current test results and the NCSP Register records only and may need to be modified if other results were reported overseas. Please forward copies of overseas pathology reports or an overseas specialist letter confirming dates and results of previous pathology tests to the NCSP Register.
AD9	Repeat HPV testing is recommended because the current HPV test was performed less than 9 months after a previous recommendation to repeat the test in 12 months.
AD10	A recommendation has been provided because the request form indicated that this is a screening sample.
AD11	No HPV result is available because of technical processing issues.

	<table><tr><th>Code</th><th>Description</th></tr><tr><td>AD12</td><td>A previous cytology report of atypical endometrial cells reported within the last three years is noted. Referral for specialist gynaecology assessment may be indicated. Please notify the NCSP Register if specialist assessment has already occurred.</td></tr><tr><td>AD13</td><td>HPV testing has been repeated because the LBC sample for cytology was taken more than three months after the previous HPV test. The recommendation in this report is based on the HPV and cytology results from the current sample.</td></tr><tr><td>AD14</td><td>HPV Testing only has been reported on this sample as there was no clinical indication to report cytology as well. If there are clinical reasons for requiring cytology which were not indicated on the request form, please contact the laboratory to discuss this. Liquid-based cytology (LBC) vials are retained for one month after receipt.</td></tr><tr><td>AD15</td><td>This sample was taken during the cytology primary screening programme and has been reported after HPV primary screening was introduced. The recommendation given has been adjusted for the HPV primary screening programme.</td></tr><tr><td>AD16</td><td>The recommendation in the report is based on the NCSP Register record up to 28 August 2023 and may need to be modified if additional cervical or vaginal screening or diagnostic tests were reported between this date and the date of the current sample.</td></tr></table>
Data type	String
Layout	X(4)
Obligation	Mandatory
Guide for use	The recommendation is reported in the OBX-5. Recommendation codes that are marked ‘currently blank’ should not be used. These have been created to maintain the code sequencing and supporting additional recommendation types in the future, should they be required.
Verification rules	One recommendation H-code is mandatory. Multiple AD codes are optionally allowed.

5.2.7 LBC product type

<table>
<tr><td>Name</td><td>LBC product type</td></tr>
<tr><td>Definition</td><td>This field is used to describe the commercial product used for an LBC collection.</td></tr>
<tr><td>Source standards</td><td></td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCLBCP Code</th><th>Commercial Preparation</th></tr>
<tr><td>SRPTH</td><td>SurePath™</td></tr>
<tr><td>THPRP</td><td>ThinPrep™</td></tr>
<tr><td>OTHER</td><td>Other</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>A(5)</td></tr>
<tr><td>Obligation</td><td>Mandatory if the 5.2.2 Preparation technique / specimen type reported is ‘LBC’.</td></tr>
<tr><td>Guide for use</td><td>The LBC Product Type is reported in the OBX-17 – Observation Method only when the preparation technique/specimen type is ‘LBC’.</td></tr>
</table>

6. Cytology test results

Laboratories interpreting cytology specimens will provide cytology reports to the NSS in a standard format. Each observation item (specimen site, preparation technique, interpretation etc) will be reported in a single OBX segment.

The observation types will be described using LOINC codes, with observation values coded in the Bethesda 2014 code-set.

6.1 Cytology report

The following lists the information required for a cytology report:

- Universal service ID
- Diagnostic service selector ID
- Cytology reporting details

The following data elements will identify that an ORU message sent to the NCSP Register is a cytology result.

Table 3: Cytology reporting details

DATA ELEMENT	FIELD	CARDINALITY	SEG/FIELD
Universal Service ID	OBR-4	1	RNZ0504^Gynaecological Cytology^NZPOCS
Diagnostic Service Selector ID	OBR-24	1	CP

6.2 Cytology results

The following lists the information required for a cytology result:

- Date specimen collected
- Preparation technique / specimen type
- Specimen site
- Statement of adequacy
- General category
- Interpretation
- Recommendation
- LBC product type

The general structure of cervical cytology reports follows the OBX segments in the table below. The LOINC codes to be used in OBX-3, Observation Identifier, are as listed in the Cytology Observation Codes table:

Table 4: Cytology Observation Codes

OBX-2 VALUE TYPE	OBX-3 – OBSERVATION IDENTIFIER			DATA STANDARD REFERENCE
	CODE	LOINC NAME	CODING SYSTEM	
CE	19763-2	Specimen Site	LN	Used for 6.2.3 Specimen site
CE	19772-3	Preparation Technique / Specimen Type	LN	Used for 6.2.2 Preparation technique / specimen type and used for 7.2.8 LBC product type
CE	19764-0	Statement of Adequacy	LN	Used for 6.2.4 Statement of adequacy
CE	19762-4	General Category	LN	Used for 6.2.5 General category
CE	19765-7	Interpretation	LN	Used for 6.2.6 Interpretation
CE	19773-1	Recommendation	LN	Used for 6.2.7 Recommendation

6.2.1 Date specimen collected

This is the date and time the specimen was collected and is reported in OBR-7 – Observation Date/Time. See 3.5.3 Date and time value domain for the format of this field.

The date the specimen was collected must be less than or equal to the current date and time.

6.2.2 Preparation technique / specimen type

<table>
<tr><td>Name</td><td>Preparation technique / specimen type</td></tr>
<tr><td>Definition</td><td>This field is used to describe the preparation technique or specimen type.</td></tr>
<tr><td>Source standards</td><td></td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>Bethesda 2014 Code</th><th>Description</th></tr>
<tr><td>LBC</td><td>Liquid based cytology</td></tr>
</table>
Note that other preparation techniques including ‘CPS’ (Conventional pap smear) and ‘COM’ (Combined) are no longer in use.
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The preparation technique/specimen type is reported in the OBX-5.
The acceptable values for preparation technique/specimen type are contained in the table above and are reported in OBX-5. Note: Several collection methods are included in the code ‘LBC’:
• Both Spatula and Cytobrush
• Cytobrush
• Spatula
• Spatula and Cervix Broom
• Cervix Broom
• Other
• Unknown
A maximum of one preparation technique / specimen type is to be reported.</td></tr>
</table>

6.2.3 Specimen site

<table>
<tr><td>Name</td><td>Specimen site</td></tr>
<tr><td>Definition</td><td>This field is used to describe the site of the specimen.</td></tr>
<tr><td>Source standards</td><td>Bethesda 2014</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>Bethesda 2014 Code</th><th>Description</th></tr>
<tr><td>R</td><td>Cervical</td></tr>
<tr><td>V</td><td>Vagina</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The acceptable values for Specimen Site are contained in the table above and are reported in OBX-5.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one specimen site is to be reported.</td></tr>
</table>

6.2.4 Statement of adequacy

<table>
<tr><td>Name</td><td>Statement of adequacy</td></tr>
<tr><td>Definition</td><td>This field is used to describe the adequacy of the specimen for evaluation by the lab.</td></tr>
<tr><td>Source standards</td><td>Bethesda 2014</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>Bethesda 2014 Code</th><th>Description</th></tr>
<tr><td>S1</td><td>The specimen is satisfactory for evaluation.</td></tr>
<tr><td>S2</td><td>The specimen is satisfactory for evaluation. No endocervical/transformation zone component present.</td></tr>
<tr><td>UA</td><td>The specimen is unsatisfactory for evaluation because of insufficient squamous cells.</td></tr>
<tr><td>UB</td><td>The specimen is unsatisfactory for evaluation because of poor fixation/preservation.</td></tr>
<tr><td>UC</td><td>The specimen is unsatisfactory for evaluation because foreign material obscures the cells.</td></tr>
<tr><td>UD</td><td>The specimen is unsatisfactory for evaluation because inflammation obscures the cells.</td></tr>
<tr><td>UE</td><td>The specimen is unsatisfactory for evaluation because blood obscures the cells.</td></tr>
<tr><td>UF</td><td>The specimen is unsatisfactory for evaluation because of cytolysis.</td></tr>
</table>
Note: Only those Bethesda Statement of Adequacy codes listed above will be accepted by the NCSP Register.
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>AX</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The acceptable values for Statement of Adequacy are contained in the table above and are reported in OBX-5.
The Bethesda code ‘UG’ is not used in New Zealand. If information is submitted using this code, any free text will not be recognised by the NCSP Register.</td></tr>
<tr><td>Verification rules</td><td>A maximum of two adequacy codes can be reported. Either one ‘S’ code or a maximum of two ‘U’ codes are allowed.</td></tr>
</table>

6.2.5 General category

<table>
<tr><td>Name</td><td>General category</td></tr>
<tr><td>Definition</td><td>A statement that expresses the essential nature of the data element and its differentiation from other elements in the data standard.</td></tr>
<tr><td>Source standards</td><td>Bethesda 2014</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>Bethesda 2014 Code</th><th>Descriptor</th><th>Grade</th></tr>
<tr><td>G1</td><td>Cytology: negative for intraepithelial lesion or malignancy</td><td>N</td></tr>
<tr><td>G2</td><td>Cytology: epithelial cell abnormality</td><td>ABN</td></tr>
<tr><td>G3</td><td>Cytology: other abnormality (non-epithelial)</td><td>ABN</td></tr>
</table>
Note: Only those Bethesda Statement of Adequacy codes listed above will be accepted by the NCSP Register.
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>AN</td></tr>
<tr><td>Obligation</td><td>Conditionally mandatory if an adequacy code of S1 or S2 is reported.</td></tr>
<tr><td>Guide for use</td><td>A general categorisation code should not be reported if an unsatisfactory (UA-UF) adequacy code is reported.
The general categorisation code is reported in the OBX-5.</td></tr>
<tr><td>Verification rules</td><td>Only one general category code for the cytology report is allowed.
A general category code is mandatory (except for an unsatisfactory cytology result where Statement of Adequacy is UA-UF).
G codes must be accompanied by either an S1 or S2 code.
Abnormal interpretation codes must be accompanied by either G2 or G3 (ASL or worse).</td></tr>
</table>

6.2.6 Interpretation

Name	Interpretation
Definition	This field is used to define the interpretation codes to accompany Cytology test results.
Source standards	Bethesda 2014

Value domain

Bethesda 2014 Code	Description	Grade
O1	There are organisms consistent with Trichomonas species.	N
O2	There are fungal organisms morphologically consistent with Candida species.	N
O3	There is a shift in microbiological flora suggestive of bacterial vaginosis.	N
O4	There are bacteria morphologically consistent with Actinomyces species.	N
O5	There are cellular changes consistent with Herpes simplex virus.	N
OT1	There are reactive cellular changes present (optional free text)*.	N
OT2	There are normal endometrial cells present in a participant aged 45 years or older. The presence of normal endometrial cells in a participant aged 45 years or older can occur with menstruation, contraceptive use, hormone replacement therapy or rarely, endometrial pathology including hyperplasia or neoplasia. Please correlate with any symptoms of uterine pathology such as abnormal uterine bleeding and refer/investigate accordingly.	N
OT3	There are atrophic cellular changes present. A course of oestrogen for 2-3 weeks prior to the next cytology sample or colposcopy is recommended.	N
ASL	There are atypical squamous cells of undetermined significance (ASC-US) present.	LG
LS	There are abnormal squamous cells consistent with a low grade squamous intraepithelial lesion (LSIL; CIN1/HPV).	LG

Bethesda 2014 Code	Description	Grade
ASH	There are atypical squamous cells present. A high grade squamous intraepithelial lesion cannot be excluded (ASC-H).	HG
HS1	There are abnormal squamous cells consistent with a high grade squamous intraepithelial lesion (HSIL). The features are consistent with CIN2 or CIN3.	HG
HS2	There are abnormal squamous cells consistent with a high grade squamous intraepithelial lesion (HSIL) with features suspicious for invasion.	HG
SC	There are abnormal squamous cells showing changes consistent with squamous cell carcinoma.	HG
AG1	There are atypical endocervical cells present.	HG
AG2	There are atypical endometrial cells present.	HG
AG3	There are atypical glandular cells present.	HG
AG4	There are atypical endocervical cells favouring a neoplastic process.	HG
AG5	There are atypical glandular cells favouring a neoplastic process.	HG
AIS	There are abnormal endocervical cells consistent with adenocarcinoma in-situ (AIS).	HG
AC1	There are abnormal glandular cells consistent with endocervical adenocarcinoma.	HG
AC2	There are abnormal glandular cells consistent with endometrial adenocarcinoma.	HG
AC3	There are abnormal glandular cells consistent with extra-uterine adenocarcinoma.	HG
AC4	There are abnormal glandular cells consistent with adenocarcinoma.	HG
AC5	There are abnormal cells consistent with a malignant neoplasm.	HG
AC6	There are abnormal cells consistent with carcinoma. Further classification is not possible.	HG

*Note: any free text sent with this Interpretation code will not be recognised by the NCSP Register

Data type	String
Layout	XXX
Obligation	Conditionally mandatory if the general category code reported is G2 or G3. Optional if the general category code reported is G1.
Guide for use	The interpretation code is reported in the OBX-5. If the reported **Statement of adequacy** includes a UA, UB, UC, UD, UE, or UF value, then only the following interpretation codes are allowed: O1, O2, O3, O4, O5, OT2, or OT3. If the reported **General Category** code is G1 then an interpretation code is optional. In this case only the following interpretation codes can be reported: O1, O2, O3, O4, O5, OT1, OT2, or OT3.
Verification rules	• A maximum of *five* interpretation codes are allowed. • G2 code is mandatory with any of the following: ASL, ASH, LS, HS1, HS2, SC, AG1-AG5, AC1-AC4, AC6. • G3 code is mandatory with AC5. • Only O1-O5, OT2 and OT3 codes are allowed with an unsatisfactory (UA-UF) report.

6.2.7 Recommendation

Name	Recommendation
Definition	This field is used to define the recommendation codes to accompany cytology test results
Source standards	Bethesda 2014
Value domain	Refer to values in the **5.2.6 Recommendation table** in the HPV Results section.
Data type	String
Layout	X(4)
Obligation	Mandatory
Guide for use	The recommendation is reported in the OBX-5.
Verification rules	One recommendation H-code is mandatory. Multiple AD codes are optionally allowed.

6.2.8 LBC product type

<table>
<tr><td>Name</td><td>LBC product type</td></tr>
<tr><td>Definition</td><td>This field is used to describe the preparation technique or specimen product type Observation Identifier.</td></tr>
<tr><td>Source standards</td><td>HISO 10008.1:2015 Pathology and Radiology Messaging Standard
National Cervical Screening Messaging Implementation Guide</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>Code (99NZCLBCP)</th><th>Commercial Preparation</th></tr>
<tr><td>SRPTH</td><td>SurePath™</td></tr>
<tr><td>THPRP</td><td>ThinPrep™</td></tr>
<tr><td>OTHER</td><td>Other</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>A(5)</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The LBC Product Type is reported in the OBX-17 when the preparation technique/specimen type is ‘LBC’.</td></tr>
</table>

7. Combined cytology / HPV test results

It is a requirement that if both an HPV and Cytology test are performed on the same LBC specimen at the same time, that these test results will be included in the same report.

In this case, it is expected that one MSH, PID and OBR segment will be provided, and OBX segments for each part of the Observation Result for both tests. The following outlines more detail on what is expected for a combined Cytology / HPV result message.

If both HPV and Cytology tests are performed on the same LBC specimen at different times, the results will be reported in separate ORU messages.

7.1 Combined cytology / HPV report

The following lists the information required for a combined cytology and HPV report:

- Universal service ID
- Diagnostic service selector ID
- Combined cytology and HPV reporting details

The following data elements will identify that an ORU message sent to the NCSP Register contains both Cytology and HPV test results.

Table 5: Combined Cytology / HPV Reporting Details

DATA ELEMENT	FIELD	CARDINALITY	SEG/FIELD
Universal Service ID	OBR-4	1	11481-9^HPV Test Result^LN
Diagnostic Service Selector ID	OBR-24	1	OTH

7.2 Combined cytology / HPV results

The following lists the information required for a combined cytology and HPV result:

- Date specimen collected
- Preparation Technique / Specimen Type
- Recommendation
- Specimen Preparation
- HPV Detection Status
- HPV Type
- Specimen site
- Statement of Adequacy
- General category
- Interpretation
- LBC Product Type

The general structure of combined cervical Cytology and HPV reports follows the OBX segments in the table below. The LOINC codes to be used in OBX-3, Observation Identifier, are as listed in the Combined Cytology / HPV Observation Codes table:

Table 6: Combined Cytology / HPV Observation Codes

OBX-2 VALUE TYPE	OBX-3 – OBSERVATION IDENTIFIER			RELEVANT TEST/S
	CODE	LOINC NAME	CODING SYSTEM	
CE	19772-3	Preparation Technique / Specimen Type	LN	Both HPV and Cytology
CE	19773-1	Recommendation	LN	Both HPV and Cytology
CE	8100-0	Specimen Preparation	LN	HPV
CE	XNZ5552	HPV Detection Status	NZPOCS	HPV
CE	XNZ5554	HPV Type	NZPOCS	HPV
CE	19763-2	Specimen Site	LN	Cytology
CE	19764-0	Statement of Adequacy	LN	Cytology
CE	19762-4	General Category	LN	Cytology
CE	19765-7	Interpretation	LN	Cytology

8. Histology test results

Histology results are reported without restriction (except as indicated in this section) using SNOMED CT codes.

While SNOMED CT codes are phased into use, SNOMED 1986 and 1993 codes will continue to be supported by the NSS. Results using the old SNOMED codes should be identified using SNM-YYYY). Once available, all observations sent to the NSS will be required to be submitted using SNOMED CT (identified in HL7 as SN), according to the NCSP Policies and Standards Section 5.

8.1 Rules for reporting cervical histology results

Only codes related to the cervix or vagina should be reported to the NCSP Register.

All hysterectomies, where all or part of the cervix is also removed, should have the code related to the cervical tissue reported to the NSS.

'Unsatisfactory for diagnosis' code (M-09000 in 1986 version, M-09010 in 1993 version, TBC in SNOMED CT version) should be sent only if the result had an unsatisfactory adequacy and there is no diagnosis possible.

8.2 Histology report

The following lists the information for submission of histology reports:

- Universal service ID
- Diagnostic service selector ID
- Histology reporting details

The following data elements will identify that an ORU message sent to the Register is a histology result.

Table 7: Combined Cytology / Histology Reporting Details

DATA ELEMENT	FIELD	CARDINALITY	SEG/FIELD
Universal Service ID	OBR-4	1	29757-2^Histology Studies^LN
Smear Taker ID	OBR-10	0 or 1	Collector ID. If not provided it will be assumed that the provider in OBR-16 also took the smear
Diagnostic Service Selector ID	OBR-24	1	PAT or SP

8.3 Histology results

The following lists the information required for histology results:

- Date specimen collected
- Topography
- Adequacy
- Diagnosis
- Specimen
- Completeness of excision

The general structure of histology reports follows the OBX segments in the table below. The LOINC codes to be used in OBX-3, Observation Identifier, are as listed in the Histology Observation Codes table:

Table 8: Histology Observation Codes

OBX-2 VALUE TYPE	OBX-3 – OBSERVATION IDENTIFIER			DATA STANDARD REFERENCE
	CODE	LOINC NAME	CODING SYSTEM	
CE	22633-2	Site of Origin	LN	Used for 8.3.2 Topography
CE	22634-0	Gross Observation	LN	Used for 8.3.3 Adequacy
CE	22637-3	Final Diagnosis	LN	Used for 8.3.4 Diagnosis
CE	66746-9	Specimen type	LN	Used for 8.3.5 Specimen Type
CE	XNZ5546	Completeness of Excision	NZPOCS	Used for 8.3.6 Completeness of Excision

While SNOMED CT codes are phased into use, SNOMED 1986 and 1993 codes will continue to be supported by the NSS.

Please refer to SNOMED Coding for Histology 2013 for the relevant SNOMED 1986 and 1993 codesets.

8.3.1 Date specimen collected

This is the date the specimen was collected and is reported in OBR-7 – Observation Date/Time. See 3.5.3 Date and time value domain for the format of this field.

The date the specimen was collected must be less than or equal to the current date and time.

8.3.2 Topography

<table>
<tr><td>Name</td><td>Topography</td></tr>
<tr><td>Definition</td><td>This field describes the site of origin of the specimen.</td></tr>
<tr><td>Source standards</td><td>SNOMED CT</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>SNOMED CT</th><th>Description</th></tr>
<tr><td>TBA</td><td>Vagina</td></tr>
<tr><td>TBA</td><td>Cervix (includes endocervix and/or ectocervix/exocervix)</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>N(18)</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The Topography is reported in the OBX-5.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one site of origin can be specified per specimen.</td></tr>
</table>

8.3.3 Adequacy

Name	Adequacy
Definition	This field describes the adequacy of the specimen for analysis.
Source standards	SNOMED CT
Value domain	<table><tr><th>SNOMED CT</th><th>Description</th></tr><tr><td>TBA</td><td>Insufficient or unsatisfactory material for diagnosis</td></tr></table> There is no code for satisfactory materials.
Data type	String
Layout	N(18)
Obligation	Optional
Guide for use	The Adequacy is reported in the OBX-5.

8.3.4 Diagnosis

Name	Diagnosis
Definition	This field describes the summary diagnosis/diagnoses following analysis of the specimen.
Source standards	SNOMED CT

Value domain

SNOMED CT	Description
TBA	Normal
TBA	Inflammation
TBA*	Squamous metaplasia
TBA	Tubo-endometrioid metaplasia
TBA	Glandular hyperplasia (any type)
TBA	Endocervical Polyp
TBA	Other benign/reactive abnormality
TBA	Possible LSIL
TBA	LSIL (HPV/CIN1/VAIN1)
TBA	Dysplasia (CIN/VAIN) NOS
TBA	HSIL (CIN2/VAIN2)
TBA*	HSIL (CIN3/VAIN3)
TBA	HSIL NOS
TBA	HSIL with suspicion of invasive SCC
TBA	Superficially invasive SCC
783212001	Squamous cell carcinoma, HPV-associated
783213006	Squamous cell carcinoma, HPV-independent
1162767002	Squamous cell carcinoma, NOS
TBA	Glandular atypia NOS
TBA	Glandular atypia, possible AIS
51642000	AIS NOS
1157180003	AIS, HPV associated
1157186009	AIS, HPV-independent
TBA	Endocervical adenocarcinoma NOS
1157177004	Endocervical adenocarcinoma, HPV associated
TBA	Endocervical adenocarcinoma, HPV independent (any type)
50698012	Endometrioid adenocarcinoma NOS

	<table><tr><th>SNOMED CT</th><th colspan="2">Description</th></tr><tr><td>TBA</td><td colspan="2">Endometrial malignancy (any type), direct spread to cervix</td></tr><tr><td>TBA</td><td colspan="2">Adenocarcinoma NOS (includes direct spread from other sites)</td></tr><tr><td>59367005</td><td colspan="2">Adenosquamous carcinoma</td></tr><tr><td>38549000</td><td colspan="2">Carcinoma, undifferentiated NOS</td></tr><tr><td>TBA</td><td colspan="2">Neuroendocrine carcinoma</td></tr><tr><td>TBA</td><td colspan="2">Neuroendocrine tumour NOS</td></tr><tr><td>TBA</td><td colspan="2">Melanoma</td></tr><tr><td>TBA</td><td colspan="2">Lymphoma</td></tr><tr><td>63264007</td><td colspan="2">Carcinosarcoma NOS</td></tr><tr><td>TBA</td><td colspan="2">Sarcoma</td></tr><tr><td>28307001</td><td colspan="2">Germ cell tumour NOS</td></tr><tr><td>TBA</td><td colspan="2">Other tumour benign (includes adenomyoma)</td></tr><tr><td></td><td colspan="2">Other tumour malignant (includes adenosarcoma, mucoepidermoid carcinoma, adenoid basal carcinoma)</td></tr><tr><td></td><td>31470003</td><td>Adenosarcoma</td></tr><tr><td></td><td>2221008</td><td>Mesonephric carcinoma</td></tr><tr><td></td><td>4079000</td><td>Mucoepidermoid carcinoma</td></tr><tr><td></td><td>128637002</td><td>Adenoid basal carcinoma</td></tr><tr><td>TBA</td><td colspan="2">Other tumour Unknown Malignant Potential</td></tr><tr><td>TBA</td><td colspan="2">Metastatic malignancy</td></tr></table>
Data type	String
Layout	N(18)
Obligation	Conditionally mandatory – if no Adequacy code is provided for unsatisfactory materials, then at least one Diagnosis must be provided.
Guide for use	The diagnosis is reported in the OBX-5. Note: 1. LSIL = Low grade squamous intraepithelial lesion 2. HSIL = High grade squamous intraepithelial lesion
Verification rules	There can be a maximum of four codes transmitted to the NCSP Register

8.3.5 Specimen type

<table>
<tr><td>Name</td><td>Specimen type</td></tr>
<tr><td>Definition</td><td>This field describes the type of specimen / procedure used to obtain the specimen for analysis.</td></tr>
<tr><td>Source standards</td><td>SNOMED CT</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>SNOMED CT Code</th><th>Specimen Type Description</th></tr>
<tr><td>TBA</td><td>Hysterectomy including cervical tissue, cervix completely excised</td></tr>
<tr><td>TBA</td><td>Hysterectomy including cervical tissue, cervix incompletely excised</td></tr>
<tr><td>258415003</td><td>Diagnostic biospy e.g. punch biopsy (SNOMED CT term: Biopsy specimen)</td></tr>
<tr><td>TBA</td><td>Treatment excision e.g. LLETZ, Laser, Cone, Trachelectomy, Vaginal resection</td></tr>
<tr><td>309286008</td><td>Polyp (SNOMED CT term: Cervical polyp specimen)</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>N(18)</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>Current State:
• Two variations of specimen/procedure codes will be accepted, either use the SNOMED procedure code or specimen type code.
• The Specimen Type is reported in the OBX-5.
• The LOINC code in the OBX-3 Observation Identifier for Specimen Type is 19763-2 Specimen Site.</td></tr>
</table>

8.3.6 Completeness of excision

<table>
<tr><td>Name</td><td>Completeness of excision</td></tr>
<tr><td>Definition</td><td>This field describes the completeness of excision of the specimen for analysis.</td></tr>
<tr><td>Source standards</td><td></td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZEXCISIONMARGIN</th><th>Completeness of Excision Description</th></tr>
<tr><td>COMPL</td><td>Completely excised</td></tr>
<tr><td>INCOM</td><td>Incompletely excised</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>N(18)</td></tr>
<tr><td>Obligation</td><td>Optional</td></tr>
<tr><td>Guide for use</td><td>The Completeness of Excision is reported in the OBX-5.
The NZPOCS code in the OBX-3 segment for Completeness of Excision is XNZ5546^Completeness of Excision^NZPOCS.</td></tr>
</table>

9. Referrals

Note: This section refers to HISO 10011.2 Referrals, Status and Discharges Messaging Standard. This is a contained standard; however, this has been included to support current implementation of messaging for cervical screening data being sent to the NSS.

The direction going forward is to use the HL7 FHIR for all new systems.

This section includes all communication with specialists including referral and visit information.

9.1 Reporting event information

Some Referral, Visit and DNA information is reported in one or both of two sets of ORC/OBR/OBX segments. Where supplied in OBX segments, reported event elements are included by supplying OBX-5 values from code tables defined in Section 10.2 to 10.5.

The following provides more details about specific RSD message types and other requirements specific to RSD messages that are sent to the Register for the National Cervical Screening Programme.

Cancer outcome status

Visit, DNA and most Discharge Summary Referral information is stored in ORC/OBR/OBX segments with an OBR-4 of 21976-6 (LOINC) "Cancer Outcome Status".

Table 9: Required fields for Cancer Outcome Status segments

FIELD	REQUIRED VALUE
OBR-4	21976-6^Cancer Outcome Status^LN
OBX-3	21976-6^Cancer Outcome Status^LN

Source of information

Referral for Treatment, and some Discharge Summary Referral information is stored in ORC/OBR/OBX segments with an OBR-4 of 21978-2 (LOINC) "Source of Information".

Table 10: Required fields for Source of Information segments

FIELD	REQUIRED VALUE
OBR-4	21978-2^Source of Information^LN
OBX-3	21978-2^Source of Information^LN

The following table lists the fields that are mandatory when received in RSD messages containing Source of Information and/or Cancer Outcome Status ORC/OBR/OBX segments, along with required values. In some cases, the fields are required only to meet the requirements of the HL7 specification and are ignored by the NCSP Register when received in RSD messages. Note that OBR-46 and OBR-47 (Placer and Filler facility identifiers) are not required in RSD messages.

Table 11: Required fields for Cancer Outcome Status and Source of Information segments

DATA ELEMENT	FIELD	CARDINALITY	COMMENTS
Order Control	ORC-1	1	Suggest 'IN'
Placer Order Number	ORC-2	1	Suggest same as RF1-6
Ordering Provider	ORC-12	1	Health Practitioner identifier
Placer Order Number	OBR-2	1	Suggest same as RF1-6
Universal Service ID	OBR-4	1	21976-6^Cancer Outcome Status^LN or 21978-2^Source of Information^LN
Observation Date/ Time	OBR-7	1	Same as RF1-7
Specimen Received Date/Time	OBR-14	1	Date received by clinic (when available). Otherwise same as RF1-7
Ordering Provider	OBR-16	1	Health Practitioner identifier (same as ORC-12) Not included where Referral Type = "DIS" or "DRF".
Result Status	OBR-25	1	'F'
Value Type	OBX-2	1	'CE' etc.
Observation Identifier	OBX-3	1	21976-6^Cancer Outcome Status^LN or 21978-2^Source of Information^LN
Observation Value	OBX-5	1	Colposcopy event data
Observation Result Status	OBX-11	1	'F'

9.1.1 Common reported event elements

Reported event elements that are common across all message types (including message deletions) are included as listed in the table below.

Table 12: Common Reported Event Elements

DATA ELEMENT	FIELD	CARDINALITY	OPTIONALITY	COMMENTS
Referred To Facility	PRD-7	1	Mandatory	Where PRD-1 = "RT".
Referred By Facility	PRD-7	1	Mandatory	Where PRD-1 = "RP".
Referral Number	RF1-6	1	Mandatory	

9.2 Referrals

Referral requests are not to be sent to the NCSP Register. Referrals should be notified to the Register once accepted by the Colposcopy Clinic.

There are four types of referrals received by the Register:

- Referrals for Treatment
- Discharge Summary Referrals
- Referrals for Transfer
- Discharges without Visits

9.3 Referrals for Treatment

These messages are sent when a participant is referred from the sample taker or their usual health provider to a Colposcopy clinic.

Reported elements should be included as listed below and as listed in section 10.1.1 Common reported event elements. Note that all OBX data will follow a "Source of Information" OBR.

Table 13: Reported Fields for Treatment Referrals and Transfers

DATA ELEMENT	FIELD	CARDINALITY	OPTIONALITY	COMMENTS
Referred To Health Practitioner	PRD-7	1	Mandatory	Where PRD-1 = "RT".
Referred By Health Practitioner	PRD-7	1	Mandatory	Where PRD-1 = "RP".
Referral Accepted Date	RF1-7	1	Mandatory	A future date is not valid for Referral Accepted Date.
Referral Status	RF1-1		Mandatory	Must be "A".
Referral Type	RF1-3	1	Mandatory	Must be: "MED" (Medical Referral)
Colposcopy Booking Priority	DG1-3.1 and DG1-3.2	1	Mandatory	Where DG1-3.3 = "99NZCOLPPRIORITY".
Booking Priority Clarification	NTE segment	1 or more	Conditional	Where the NTE segments follow DG1 segment with Booking Priority code. NTE-4 comment type code must be OC.
Referral Accepted (by Colposcopy) Date	OBR-7	1	Mandatory	A future date is not valid for Date Referral Accepted.
Date Received by Clinic	OBR-14	1	Mandatory	
General Diagnosis Notes	NTE segment	1 or more	Optional	Where the NTE segments follow a DG1 segment with Booking Priority code. NTE-4 comment type code must be OC.
Reason for Referral	OBX-5	1	Mandatory	Where OBX-5.3 = "99NZCOLPREASON".

Reason for Referral Clarification	NTE segment	1	Conditional If Reason for Referral is 'Other' then free text description is mandatory.	Where NTE segments follow OBX segment where OBX-5 = "99NZCOLPREASON".
Method of Referral	OBX-5	1	Optional	Where OBX segment has OBX-5.3 = "99NZREFMED".
Method of Referral Clarification	NTE segment	1 or more	Conditional Free text description is mandatory when Method of Referral is 'Other'	Where NTE segments follow OBX segment where OBX-5 = "99NZREFMED". NTE-4 comment type code must be OC.
Follow-up Timeframe	OBX-5	1	Optional	Where OBX-5.3 = "99NZCOLPFLWTIME".
Scheduled Appointment Date	OBX-19	1	Optional	Where OBX-5.1 and OBX-5.3 = "99NZCOLPAPPOINTMENT".
Colposcopy Standard	OBX-5	1	Mandatory	Where OBX-5.3 = "99NZCOLPSTANDARD".
Colposcopy Assessment (type of visit)	OBX-5	1	Mandatory	Where OBX-5.3 = "99NZCOLPASSESSMENT".

Cancellation of referrals for treatment or transfer

Referrals for Treatment are cancelled by supplying a message of type REF^I14. The following fields (alongside the fields in section 10.1.1 Common reported event elements) are required in order to cancel a referral:

Table 14: Fields required for Referral Deletion

DATA ELEMENT	FIELD	CARDINALITY	OPTIONALITY	COMMENTS
Referral Accepted Date	RF1-7	1	Mandatory	RF1-7 Referral Accepted Date must be provided in order to identify referral events that have been created manually.

9.3.1 Referral accepted date

This field is used to report the date and time that the colposcopy referral was accepted by the colposcopy clinic. This is reported in OBR-7 – Observation Date/Time and RF1-7 – Effective Date. See 3.5.3 Date and time value domain for the format of this field.

The referral accepted date must be less than or equal to the current date and time.

9.3.2 Date received by clinic

This field is used to report the date and time that the colposcopy referral was received by the colposcopy clinic. This is reported in OBR-14 – Specimen Received Date/Time . See 3.5.3 Date and time value domain for the format of this field. This field is required to be submitted.

The **Date received by clinic** must be less than or equal to the current date and time.

9.3.3 Reason for referral

<table>
<tr><td>Name</td><td>Reason for referral</td></tr>
<tr><td>Definition</td><td>This field is used to report the reason for the colposcopy/oncology referral.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>Code (99NZCOLPREASON)</th><th>Description</th></tr>
<tr><td>HPV1618</td><td>HPV16/18 with cytology known, pending or to be taken at colposcopy</td></tr>
<tr><td>HPVOH</td><td>HPV other with HSIL on cytology</td></tr>
<tr><td>HPVOL</td><td>HPV other persistent low grade change</td></tr>
<tr><td>ACRV</td><td>Abnormal cervical appearance</td></tr>
<tr><td>HRFR</td><td>Historic reason for referral*</td></tr>
<tr><td>OTHR</td><td>Other Reason</td></tr>
</table>
*For ‘Historic reason for referral’, this should be used where the Reason for Referral is a value from the National Cervical Screening Programme Policies and Standards. In this case, please include the 2013 Reason for Referral in a following NTE.
Historic 2013 reason for referral values can be found in the NSU Implementation Guide v2.0.
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The Reason for Referral is reported in OBX-5. The third value in the OBX-5 segment should contain “99NZCOLPREASON”.
The LOINC code to use in the OBX-3 Observation identifier for Reason for Referral is 21976-6^Cancer Outcome Status^LN. The OBX segment containing Reason for Referral will follow the “OBR.4 – Universal Service ID using LOINC code of 21978-2 Source of Information.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one reason can be reported.</td></tr>
</table>

9.3.4 Method of referral

<table>
<tr><td>Name</td><td>Method of referral</td></tr>
<tr><td>Definition</td><td>This field is used to report the method of referral.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme
Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZREFMED Code</th><th>Description</th></tr>
<tr><td>PH</td><td>Phone</td></tr>
<tr><td>LTR</td><td>Letter</td></tr>
<tr><td>OTHR</td><td>Other</td></tr>
</table>
</td></tr>
<tr><td>Obligation</td><td>Optional</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>A(4)</td></tr>
<tr><td>Guide for use</td><td>The Method of Referral is reported in OBX-5. The third value in the OBX-5 segment should contain “99NZREFMED”.
The OBX segment containing Method of Referral will follow the “Source of Information” OBR.
The LOINC code in the OBR-4 segment and the OBX-3 segment is 21978-2^Source of Information^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one method can be reported.</td></tr>
</table>

9.3.5 Colposcopy booking priority

Name	Colposcopy booking priority
Definition	This field is used to report the booking priority for the Colposcopy referral.
Source standards	Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.

Value domain

99NZCOLPPRIORITY Code	Description
HPV1618O30	HPV16/18 with cytology unknown, pending or to be taken at colposcopy - No cytology under-screened or never screened >30
HPV1618U30	HPV16/18 with cytology unknown, pending or to be taken at colposcopy - No cytology under-screened or never screened <30
HPV1618H	HPV16/18 with cytology known, pending or to be taken at colposcopy – cytology result of ASCH/HSIL, AIS, or any glandular abnormality
HPV1618U	HPV16/18 with cytology known, pending or to be taken at colposcopy – cytology test is unsatisfactory
HPV1618L	HPV16/18 with cytology known, pending or to be taken at colposcopy – cytology result of Negative or ASCUS/LSIL
HPV1618S	HPV16/18 with cytology known, pending or to be taken at colposcopy – cytology result suspicious of invasive
HPV1618D	HPV16/18 with cytology known, pending or to be taken at colposcopy – HPVD any 12 months post colposcopy type 3 TZ
HPVOH	HPV other with HSIL on cytology – cytology result of ASCH/HSIL, AIS, or any glandular abnormality (excluding invasive)
HPVOHI	HPV other with HSIL on cytology – cytology result suspicious of or definite invasive
HPVOHD	HPV other with HSIL on cytology – HPVD any 12 months post colposcopy type 3 TZ
HPVOL3	HPV other persistent low grade change – Third HPV detected other and cytology result of Negative or ASCUS/LSIL <50
HPVOL2	HPV other persistent low grade change – Second HPV detected other and cytology result of Negative or ASCUS/LSIL >50

	99NZCOLPPRIORITY Code / Description
	HPVOLI – HPV other persistent low grade change – cytology result suspicious of or definite invasive
	HPVOLD – HPV other persistent low grade change – HPVD any 12 months post colposcopy type 3 TZ
	ACRVQ – Abnormal cervical appearance – ?ca
	ACRVN – Abnormal cervical appearance – Normal sample history, including current sample
	HRFR – Previous recent history of low grade
	OTHRA – Other Reason – HPVND and >ASC-H 12 months post colposcopy type 3 TZ
	OTHRS – Other Reason – HPVND and suspicion of invasive (with or without cytology)
	OTHRO – Other Reason – Other clinical assessment
Obligation	Mandatory
Data type	String
Layout	X(10)
Guide for use	The Colposcopy Booking Priority is reported in DG1-3. The third value in the DG1-3 segment for reporting the Colposcopy Booking Priority is "99NZCOLPPRIORITY".
Verification rules	A maximum of one booking priority can be reported.

9.3.6 Follow-up timeframe

Name	Follow-up timeframe
Definition	This field is used to report the timeframe for the participant to be seen for follow-up
Source standards	Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.
Value domain	

99NZCOLPFLWTIME Code	Description
7D	7 days
2W	2 weeks
6W	6 weeks
1M	1 month
2M	2 months
3M	3 months
4M	4 months
6M	6 months
7M	7 months
9M	9 months
12M	12 months
18M	18 months
36M	36 months
60M	60 months
NS	Not Stated

Obligation	Optional
Data type	String
Layout	X(3)
Guide for use	The Follow-up Timeframe is reported in OBX-5. The third value in the OBX-5 is "99NZCOLPFLWTIME". The following should be used when messaging the above information: • The LOINC code in the OBR-4 segment is 21978-2^Source of Information^LN. • The LOINC code in the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.
Verification rules	A maximum of one timeframe can be reported.

9.3.7 Scheduled appointment date

This field is used to report the date and time that the colposcopy referral was accepted by the colposcopy clinic. This is reported in OBX-19 –Date/ Time of the Analysis. See 3.4.3 Date and time value domain for the format of this field.

The following should be used when messaging the above information:

- The LOINC code in the OBR-4 segment is 21978-2^Source of Information^LN.
- The LOINC code in the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.
- The OBX-5 segment should contain the value = "99NZCOLPAPPOINTMENT" with the format as documented under the heading of **RSD Messages** in the **OBX-5 – 5 Observation Value**.

9.3.8 Colposcopy assessment (type of visit)

<table>
<tr><td>Name</td><td>Colposcopy assessment</td></tr>
<tr><td>Definition</td><td>This field is used to report the colposcopy assessment (type of visit).</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPASSESSMENT</th><th>Description</th></tr>
<tr><td>A1</td><td>First assessment (new case)</td></tr>
<tr><td>F1</td><td>First follow-up</td></tr>
<tr><td>F2</td><td>Second follow-up</td></tr>
<tr><td>F3</td><td>Third follow-up</td></tr>
<tr><td>F4</td><td>Fourth (or greater) follow-up</td></tr>
</table>
</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Guide for use</td><td>The Colposcopy Assessment is reported in OBX-5. The third value in the OBX-5 segment for Colposcopy Assessment has a value of “99NZCOLPASSESSMENT”.
The following should be used when messaging the above information:
• The LOINC code in the OBR-4 segment is 21978-2^Source of Information^LN.
• The LOINC code in the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one assessment value can be reported.</td></tr>
</table>

9.3.9 Colposcopy standard

<table>
<tr><td>Name</td><td>Colposcopy standard</td></tr>
<tr><td>Definition</td><td>This field is used to report the Colposcopy standard.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme
Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPSTANDARD</th><th>Description</th></tr>
<tr><td>COLP2008</td><td>2008 Standard</td></tr>
<tr><td>COLP2013</td><td>2013 Standard</td></tr>
<tr><td>COLP2023</td><td>2023 Standard</td></tr>
</table>
</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>AAAAYYYY</td></tr>
<tr><td>Obligation</td><td>Optional</td></tr>
<tr><td>Guide for use</td><td>The Colposcopy Standard is reported in OBX-5. The third value in the OBX-5 segment for Colposcopy Standard has a value of “99NZCOLPSTANDARD”.
The following should be used when messaging the above information:
• The LOINC code in the OBR-4 segment is 21978-2^Source of Information^LN.
• The LOINC code in the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one standard can be reported.</td></tr>
</table>

9.4 Discharge Summary Referrals

These messages are sent when a participant is referred from a colposcopy clinic back to the sample taker or their usual health provider after having attended a colposcopy visit.

Reported elements should be included as listed below and as listed in section 9.1.1 Common reported event elements. Note that all OBX data except Method of Referral will follow a "Cancer Outcome Status" OBR, and Method of Referral OBX data will follow the "Source of Information" OBR.

Table 15: Discharge Summary Referrals

DATA ELEMENT	FIELD	CARDINALITY	OPTIONALITY	COMMENTS
Referred To Health Practitioner	PRD-7	1	Mandatory	Where PRD-1 = "RT".
Referred By Health Practitioner	PRD-7	1	Mandatory	Where PRD-1 = "RP".
Date of Discharge	RF1-7	1	Mandatory	A future date is not valid for Date of Discharge.
Referral Status	RF1-1		Mandatory	Must be "A".
Referral Type	RF1-3	1	Mandatory	Must be: "DIS" (Discharge Summary)
Referral Accepted Date	OBR-7	1	Mandatory	A future date is not valid for Date Referral Accepted.
Date Received by Clinic	OBR-14	1	Mandatory	
Method of Referral	OBX-5	1	Optional	Where OBX segment has OBX-5.3 = "99NZREFMED"

Method of Referral Clarification	NTE segment	1 or more	Conditional Free text description is mandatory when Method of Referral is 'Other'	Where NTE segments follow OBX segment where OBX-5 ="99NZREFMED". NTE-4 comment type code must be OC.
Follow-up Timeframe	OBX-5	1	Optional	Where OBX-5.3 = "99NZCOLPFLWTIME".
Follow-up Test	OBX-5	1	Optional	Where OBR-4 includes "Cancer Outcome Status" and OBX-5.3 = "99NZFLWUPTEST"
Colposcopy Standard	OBX-5	1	Mandatory	Where OBX-5.3 = "99NZCOLPSTANDARD".
Colposcopy Assessment (type of visit)	OBX-5	1	Mandatory	Where OBX-5.3 = "99NZCOLPASSESSMENT".
Recommended Follow-up Type	OBX-5	1	Mandatory	Where OBR-4 includes "Cancer Outcome Status" and OBX-5.3 = "99NZCOLPFLWUP" Recommended Follow-up Type can be "SMT".
Visit Attended Indicator	OBX-5	1	Mandatory	Where OBR-4 includes "Cancer Outcome Status" and OBX-5.3 = "99NZCOLPVSTATND". OBX-5.1 allows "Y" or "N".

Cancellation of Discharge Summary Referrals

Discharge Summaries are cancelled by supplying a message of type REF^I14. The following fields (alongside the fields in section 10.1.1 Common reported event elements) are required in order to cancel a discharge:

Table 16: Fields required for Discharge Deletion

DATA ELEMENT	FIELD	CARDINALITY	OPTIONALITY	COMMENTS
Date of Discharge	RF1-7	1	Mandatory	RF1-7 Date of Discharge must be provided in order to identify referral events that have been created manually.

9.4.1 Date of Discharge

This field is used to report the date and time that the colposcopy referral was accepted by the colposcopy clinic. This is reported in RF1-7 – Effective Date. See 3.5.3 Date and time value domain for the format of this field.

The date of discharge must be less than or equal to the current date and time.

9.4.2 Referral accepted date

This field is used to report the date and time that the colposcopy referral was accepted by the colposcopy clinic. This is reported in OBR-7 – Observation Date/Time. See 3.5.3 Date and time value domain for the format of this field.

The referral accepted date must be less than or equal to the current date and time.

9.4.3 Date received by clinic

This field is used to report the date and time that the colposcopy referral was received by the colposcopy clinic. This is reported in OBR-14 – Specimen Received Date/Time. See 3.5.3 Date and time value domain for the format of this field. This field is required to be submitted.

The date received by clinic must be less than or equal to the current date and time.

9.4.4 Method of referral

<table>
<tr><td>Name</td><td>Method of referral</td></tr>
<tr><td>Definition</td><td>This field is used to report the method of referral.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZREFMED Code</th><th>Description</th></tr>
<tr><td>PH</td><td>Phone</td></tr>
<tr><td>LTR</td><td>Letter</td></tr>
<tr><td>OTHR</td><td>Other</td></tr>
</table>
</td></tr>
<tr><td>Obligation</td><td>Optional</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>A(4)</td></tr>
<tr><td>Guide for use</td><td>The Method of Referral is reported in OBX-5. The third value in the OBX-5 segment should contain “99NZREFMED”.
The OBX segment containing Method of Referral will follow the “Source of Information” OBR.
The LOINC code in the OBR-4 segment and the OBX-3 segment is 21978-2^Source of Information^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one method can be reported.</td></tr>
</table>

9.4.5 Follow-up timeframe

This field is used to report the follow-up timeframe. See the table in 10.3.6 Follow-up timeframe for acceptable values.

The Follow-up Timeframe is reported in OBX-5. The third value in the OBX-5 is "99NZCOLPFLWTIME".

When sending this information in a Discharge Summary Referral message the OBR-4 segment and the OBX-3 segment include 21976-6^Cancer Outcome Status^LN.

9.4.6 Colposcopy assessment (type of visit)

Refer to the value domain, OBX-5 reporting requirements and the verification rules of 10.3.8 Colposcopy assessment (type of visit). When reporting this information for 'Discharge Summary Referrals', the messaging should include the LOINC code in the OBR-4 segment and the OBX-3 segment of 21976-6^Cancer Outcome Status^LN.

9.4.7 Colposcopy standard

See section 10.3.9 Colposcopy standard for details of this data element. When reporting this information for 'Discharge Summary Referrals', the messaging should include the LOINC code in the OBR-4 segment and the OBX-3 segment of 21976-6^Cancer Outcome Status^LN.

9.4.8 Follow-up test

<table>
<tr><td>Name</td><td>Follow-up test</td></tr>
<tr><td>Definition</td><td>This field is used to report the follow-up test that is recommended by the Colposcopist.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a colposcopy service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZFLWUPTEST Code</th><th>Description</th></tr>
<tr><td>NFSR</td><td>No further screening required</td></tr>
<tr><td>HPVPS</td><td>HPV Primary Screening</td></tr>
<tr><td>HPVCYTO</td><td>HPV +/- Cytology</td></tr>
<tr><td>1TOC</td><td>1st Test of Cure</td></tr>
<tr><td>2TOC</td><td>2nd Test of Cure</td></tr>
<tr><td>ACT</td><td>Annual Co-test</td></tr>
</table>
</td></tr>
<tr><td>Obligation</td><td>Optional</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(7)</td></tr>
<tr><td>Guide for use</td><td>The Follow-up test is reported in OBX-5. The third value in the OBX-5 segment should contain “99NZFLWUPTEST”.
The following should be used when messaging the above information:
• The LOINC code in the OBR-4 segment is 21976-6^Cancer Outcome Status^LN.
• The LOINC code in the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one follow-up test can be reported.</td></tr>
</table>

9.4.9 Recommended follow-up clinician type

Name	Recommended follow-up clinician type
Definition	This field is used to report the recommended follow-up clinician type. This indicates who the participant should be discharged to.
Source standards	Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.
Value domain	**99NZCOLPFLWUP** / **Description** SMT / Sample taker (i.e. discharged)
Data type	String
Layout	X(18)
Obligation	Mandatory
Guide for use	The Recommended Follow-up Clinician Type is reported in OBX-5. The third value of the OBX-5 segment for Recommended Follow-up Clinician Type is "99NZCOLPFLWUP When sending this information in a message the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.
Verification rules	A maximum of one follow-up type can be reported.

9.4.10 Visit attended indicator

<table>
<tr><td>Name</td><td>Visit attended indicator</td></tr>
<tr><td>Definition</td><td>This field is used to indicate whether the participant attended a colposcopy visit</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPVSTATND</th><th>Description</th></tr>
<tr><td>Y</td><td>Yes</td></tr>
<tr><td>N</td><td>No</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>A</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The Visit attended indicator is reported in OBX-5. The third value of the OBX-5 segment for Recommended Follow-up Type is “99NZCOLPVSTATND”
When sending this information in a message the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one value can be reported.</td></tr>
</table>

9.5 Referrals for Transfer

These messages are sent when a participant is referred from a colposcopy clinic onwards to another colposcopy clinic, gynaecology, or an oncology department.

Reported elements should be included as listed below and as listed in section 9.1.1 Common reported event elements. Note that all OBX data will follow a "Cancer Outcome Status" OBR.

Table 17: Referrals for Transfer

DATA ELEMENT	FIELD	CARDINALITY	OPTIONALITY	COMMENTS
Referred To Health Practitioner	PRD-7	1	Mandatory	Where PRD-1 = "RT".
Referred By Health Practitioner	PRD-7	1	Mandatory	Where PRD-1 = "RP".
Date of Discharge	RF1-7	1	Mandatory	A future date is not valid for Date of Discharge.
Referral Status	RF1-1		Mandatory	Must be "A".
Referral Type	RF1-3	1	Mandatory	Must be: "DRF" (Discharge Referral)
Recommended Follow-up Type	OBX-5	1	Mandatory	Where OBR-4 includes "Cancer Outcome Status" and OBX-5.3 = "99NZCOLPFLWUP". Recommended Follow-up Type can be "OTHER" or "ONCOL".
Visit Attended Indicator	OBX-5	1	Mandatory	Where OBR-4 includes "Cancer Outcome Status" and OBX-5.3 = "99NZCOLPVSTATND". OBX-5.1 allows "Y" or "N".

Cancellation of Referrals for Transfer

Referrals for Transfer (Discharge Referrals) are cancelled by supplying a message of type REF^I14. The following fields (alongside the fields in section 10.1.1 Common reported event elements) are required in order to cancel a discharge:

Table 18: Fields required for Discharge Deletion

DATA ELEMENT	FIELD	CARDINALITY	OPTIONALITY	COMMENTS
Date of Discharge	RF1-7	1	Mandatory	RF1-7 Date of Discharge must be provided in order to identify referral events that have been created manually.

9.5.1 Date of Discharge

This field is used to report the date and time that the colposcopy referral was accepted by the colposcopy clinic. This is reported in RF1-7 – Effective Date. See 3.5.3 Date and time value domain for the format of this field.

The date of discharge must be less than or equal to the current date and time.

9.5.2 Recommended follow-up clinician type

Name	Recommended follow-up clinician type
Definition	This field is used to report the recommended follow-up clinician type. This indicates who the participant should be discharged to.
Source standards	Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.
Value domain	99NZCOLPFLWUP: Description OTHER: Other ONCOL: Oncology services (i.e. referred)
Data type	String
Layout	X(18)
Obligation	Mandatory
Guide for use	The Recommended Follow-up Clinician Type is reported in OBX-5. The third value of the OBX-5 segment for Recommended Follow-up Type is "99NZCOLPFLWUP When sending this information in a message the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.
Verification rules	A maximum of one follow-up type can be reported.

9.5.3 Visit attended indicator

<table>
<tr><td>Name</td><td>Visit attended indicator</td></tr>
<tr><td>Definition</td><td>This field is used to indicate whether the participant attended a colposcopy visit</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPVSTATND</th><th>Description</th></tr>
<tr><td>Y</td><td>Yes</td></tr>
<tr><td>N</td><td>No</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>A</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The Visit attended indicator is reported in OBX-5. The third value of the OBX-5 segment for Recommended Follow-up Type is “99NZCOLPVSTATND”.
When sending this information in a message the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one value can be reported.</td></tr>
</table>

9.6 Discharges without visits

These messages are sent when a participant is discharged without having attended a visit. This may occur if the colposcopy clinic rejects the referral, or if the participant declines the referral.

A Discharge without Visit could have a Referral Type (RF1-3) of "DIS" (Discharge Summary) or "DRF" (Discharge Referral) depending on where the participant is discharged to.

If the participant is discharged back to the sample taker or usual health provider, then the Referral Type "DIS" (Discharge Summary) should be used, similar to a Discharge Summary Referral.

If the participant is discharged to another colposcopy clinic, then the Referral Type "DRF" (Discharge Referral) should be used, similar to a Referral for Transfer.

Discharge Summaries and Discharge Referrals that are sent without Visit information do not include a PV1 segment and may include limited information within the Cancer Outcome Status OBR.

Reported elements should be included as listed below and as listed in section 10.1.1 Common reported event elements.

Note that all OBX data except Method of Referral will follow a "Cancer Outcome Status" OBR, and Method of Referral OBX data will follow the "Source of Information" OBR.

Table 19: Discharges without visits

DATA ELEMENT	FIELD	CARDINALITY	OPTIONALITY	COMMENTS
Referred To Health Practitioner	PRD-7	1	Mandatory	Where PRD-1 = "RT".
Referred To Health Practitioner	PRD-7	1	Mandatory	Where PRD-1 = "RP".
Date of Discharge	RF1-7	1	Mandatory	A future date is not valid for Date of Discharge.
Referral Status	RF1-1		Mandatory	Must be "A".
Referral Type	RF1-3	1	Mandatory	Can be: "DIS" (Discharge Summary) "DRF" (Discharge Referral)

Referral Accepted Date	OBR-7	1	Mandatory	A future date is not valid for Referral Accepted Date.
Date Received by Clinic	OBR-14	1	Conditional: Mandatory if the Referral Type is "DIS" Not used if the Referral Type is "DRF"	
Method of Referral	OBX-5	1	Conditional: Optional if the Referral Type is "DIS" Not used if the Referral Type is "DRF"	Where OBX segment has OBX-5.3 = "99NZREFMED"
Method of Referral Clarification	NTE segment	1 or more	Conditional: If Method of Referral is 'Other' then free text description is mandatory	Where NTE segments follow OBX segment where OBX-5="99NZREFMED". NTE-4 comment type code must be OC.
Follow-up Timeframe	OBX-5	1	Conditional: Optional if the Referral Type is "DIS" Not used if the Referral Type is "DRF"	Where OBX-5.3 = "99NZCOLPFLWTIME". Timeframe for participant to be seen in should not be provided when Referral Type is Transfer responsibility (RF1-3 = "DRF").

Colposcopy Standard	OBX-5	1	Conditional: Mandatory if the Referral Type is "DIS" Not used if the Referral Type is "DRF"	Where OBX-5.3 = "99NZCOLPSTANDARD".
Colposcopy Assessment (type of visit)	OBX-5	1	Conditional: Mandatory if the Referral Type is "DIS" Not used if the Referral Type is "DRF"	Where OBX-5.3 = "99NZCOLPASSESSMENT".
Recommended Follow-up Type	OBX-5	1	Mandatory	Where OBR-4 includes "Cancer Outcome Status" and OBX-5.3 = "99NZCOLPFLWUP". If Referral Type = "DIS" then Recommended Follow-up Type can be "SMT". If Referral Type = "DRF" then Recommended Follow-up Type can be "OTHER" or "ONCOL".
Visit Attended Indicator	OBX-5	1	Mandatory	Where OBR-4 includes "Cancer Outcome Status" and OBX-5.3 = "99NZCOLPVSTATND". OBX-5.1 allows "Y" or "N".

Cancellation of Discharges without Visits

Discharges without Visits (Discharge Summaries or Discharge Referrals) are cancelled by supplying a message of type REF^I14. The following fields (alongside the fields in section 10.1.1 Common reported event elements) are required to cancel a Discharge without Visit:

Table 20: Fields required for Discharge Deletion

DATA ELEMENT	FIELD	CARDINALITY	OPTIONALITY	COMMENTS
Date of Discharge	RF1-7	1	Mandatory	RF1-7 Date of Discharge must be provided in order to identify referral events that have been created manually.

9.6.1 Date of Discharge

This field is used to report the date and time that the colposcopy referral was accepted by the colposcopy clinic. This is reported in RF1-7 – Effective Date. See 3.5.3 Date and time value domain for the format of this field.

The date of discharge must be less than or equal to the current date and time.

9.6.2 Referral accepted date

This field is used to report the date and time that the colposcopy referral was accepted by the colposcopy clinic. This is reported in OBR-7 – Observation Date/Time. See 3.5.3 Date and time value domain for the format of this field.

The referral accepted date must be less than or equal to the current date and time.

9.6.3 Date received by clinic

This field is used to report the date and time that the colposcopy referral was received by the colposcopy clinic. This is reported in OBR-14 – Specimen Received Date/Time. See 3.5.3 Date and time value domain for the format of this field. This field is required to be submitted.

The date received by clinic must be less than or equal to the current date and time.

9.6.4 Method of referral

<table>
<tr><td>Name</td><td>Method of referral</td></tr>
<tr><td>Definition</td><td>This field is used to report the method of referral.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme
Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZREFMED Code</th><th>Description</th></tr>
<tr><td>PH</td><td>Phone</td></tr>
<tr><td>LTR</td><td>Letter</td></tr>
<tr><td>OTHR</td><td>Other</td></tr>
</table>
</td></tr>
<tr><td>Obligation</td><td>Optional if the Referral Type is “DIS”. Not used if the Referral Type is “DRF”.</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>A(4)</td></tr>
<tr><td>Guide for use</td><td>The Method of Referral is reported in OBX-5. The third value in the OBX-5 segment should contain “99NZREFMED”.
The OBX segment containing Method of Referral will follow the “Source of Information” OBR.
The LOINC code in the OBR-4 segment and the OBX-3 segment is 21978-2^Source of Information^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one method can be reported.</td></tr>
</table>

9.6.5 Follow-up timeframe

Name	Follow-up timeframe
Definition	This field is used to report the timeframe for the participant to be seen for follow-up
Source standards	Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.
Value domain	

99NZCOLPFLWTIME Code	Description
7D	7 days
2W	2 weeks
6W	6 weeks
1M	1 month
2M	2 months
3M	3 months
4M	4 months
6M	6 months
7M	7 months
9M	9 months
12M	12 months
18M	18 months
36M	36 months
60M	60 months
NS	Not Stated

Obligation	Optional if the Referral Type is “DIS”. Not used if the Referral Type is “DRF”.
Data type	String
Layout	X(3)
Guide for use	The Follow-up Timeframe is reported in OBX-5. The third value in the OBX-5 is “99NZCOLPFLWTIME”. The following should be used when messaging the above information: • The LOINC code in the OBR-4 segment is 21976-6^Cancer Outcome Status^LN. • The LOINC code in the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.
Verification rules	A maximum of one timeframe can be reported.

9.6.6 Colposcopy assessment (type of visit)

<table>
<tr><td>Name</td><td>Colposcopy assessment (type of visit).</td></tr>
<tr><td>Definition</td><td>This field is used to report the colposcopy assessment (type of visit).</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme
Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPASSESSMENT</th><th>Description</th></tr>
<tr><td>A1</td><td>First assessment (new case)</td></tr>
<tr><td>F1</td><td>First follow-up</td></tr>
<tr><td>F2</td><td>Second follow-up</td></tr>
<tr><td>F3</td><td>Third follow-up</td></tr>
<tr><td>F4</td><td>Fourth (or greater) follow-up</td></tr>
</table>
</td></tr>
<tr><td>Obligation</td><td>Mandatory if the Referral Type is “DIS”. Not used if the Referral Type is “DRF”.</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Guide for use</td><td>The Colposcopy Assessment is reported in OBX-5. The third value in the OBX-5 segment for Colposcopy Assessment has a value of “99NZCOLPASSESSMENT”.
The following should be used when messaging the above information:
• The LOINC code in the OBR-4 segment is 21976-6^Cancer Outcome Status^LN.
• The LOINC code in the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one assessment value can be reported.</td></tr>
</table>

9.6.7 Colposcopy standard

<table>
<tr><td>Name</td><td>Colposcopy standard</td></tr>
<tr><td>Definition</td><td>This field is used to report the colposcopy standard.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme
Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPSTANDARD</th><th>Description</th></tr>
<tr><td>COLP2008</td><td>2008 Standard</td></tr>
<tr><td>COLP2013</td><td>2013 Standard</td></tr>
<tr><td>COLP2023</td><td>2023 Standard</td></tr>
</table>
</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>AAAAYYYY</td></tr>
<tr><td>Obligation</td><td>Mandatory if the Referral Type is “DIS”. Not used if the Referral Type is “DRF”.</td></tr>
<tr><td>Guide for use</td><td>The Colposcopy Standard is reported in OBX-5. The third value in the OBX-5 segment for Colposcopy Standard has a value of “99NZCOLPSTANDARD”.
The following should be used when messaging the above information:
• The LOINC code in the OBR-4 segment is 21976-6^Cancer Outcome Status^LN.
• The LOINC code in the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one standard can be reported.</td></tr>
</table>

9.6.8 Recommended follow-up clinician type

<table>
<tr><td>Name</td><td>Recommended follow-up clinician type</td></tr>
<tr><td>Definition</td><td>This field is used to report the recommended follow-up clinician type.
This indicates who the participant should be discharged to.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPFLWUP</th><th>Description</th></tr>
<tr><td>SMT</td><td>Sample taker (i.e. discharged)</td></tr>
<tr><td>OTHER</td><td>Other</td></tr>
<tr><td>ONCOL</td><td>Oncology services (i.e. referred)</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The Recommended Follow-up Clinician Type is reported in OBX-5.
The third value of the OBX-5 segment for Recommended Follow-up Type is “99NZCOLPFLWUP
When sending this information in a message the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one follow-up type can be reported.</td></tr>
</table>

9.6.9 Visit attended indicator

<table>
<tr><td>Name</td><td>Visit attended indicator</td></tr>
<tr><td>Definition</td><td>This field is used to indicate whether the participant attended a colposcopy visit</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPVSTATND</th><th>Description</th></tr>
<tr><td>Y</td><td>Yes</td></tr>
<tr><td>N</td><td>No</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>A</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The Visit attended indicator is reported in OBX-5. The third value of the OBX-5 segment for Recommended Follow-up Type is “99NZCOLPVSTATND”
When sending this information in a message the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one value can be reported.</td></tr>
</table>

9.7 Visits

Visit information can be included in a Notification message. A message is for a visit if it contains a PV1 segment, which is mandatory in a Notification message. Reported elements should be included as listed below and as listed in section 10.1.1 Common reported event elements. Note that all OBX data will follow a "Cancer Outcome Status" OBR.

Table 21: Reported fields for visits

DATA ELEMENT	FIELD	CARDINALITY	OPTIONALITY	COMMENTS
Referred To Health Practitioner	PRD-7	1	Mandatory	Where PRD-1 = "RT".
Referred By Health Practitioner	PRD-7	1	Mandatory	Where PRD-1 = "RP".
Referral Status	RF1-1		Mandatory	Value must be "A".
Referral Type	RF1-3	1	Mandatory	Must be: "NOT" – Notification
Referral Number	RF1-6	1	Mandatory	
Referral Accepted Date	RF1-7		Mandatory	A future date is not valid for Referral Accepted Date.
Admission Type (called Patient Class in HL7 specification)	PV1-2	1	Mandatory	The Admission Type is mandatory for an attended Colposcopy Visit.
Visit Date	PV1-44	1	Mandatory	The Visit Date has to be on or earlier than the current date.
Result Status	OBR-25	1	Mandatory	When the Result Status is Final: • Save it, if there is no Final version of this event for the participant. • Reject it, if there already is a Final version of this event for the participant. When the Result Status is Change: • Save it, regardless. When the Result Status is not Final, Change or Cancel: • Don't save, just acknowledge receipt.

Colposcopy Site	OBX-5	1	Conditional	Include OBX-5 where OBX-3 = "19763-2^Specimen Site^LN". When a Colposcopy is performed, site must be one of Cervical, Vaginal or Both.
Transformation Zone Visibility	OBX-5	1	Conditional	Where OBX-5.3 = "99NZCOLPTZ". Required if Colposcopy is performed and the site is 'Cervical' or 'Both'. Not used if Colposcopy is performed and the site is 'Vaginal'.
Squamocolumnar Junction Visibility	OBX-5	1	Conditional	Where OBX-5.3 = "99NZCOLPSCJ". Required if Colposcopy is performed and the site is 'Cervical'. Required if Colposcopy is performed and the site is 'Both'. Not used if Colposcopy is performed and the site is 'Vaginal'.
Colposcopic Appearance	OBX-5	1	Conditional	Where OBX-5.3 = "99NZCOLPAPR". Required if Colposcopy is performed.
Predicted Abnormality Grade	OBX-5	1 or more	Conditional	Where OBX-5.3 = "99NZCOLPGRADE". Required if 'Colposcopic Appearance' = "Abnormal", otherwise it is not to be provided.
Visit Actions	OBX-5	1 or more	Conditional	Where OBX-5.3 = "99NZCOLPACTION". Required if a visit is attended.
Visit Action Comments	NTE segment	1 or more	Optional	Where NTE segments follow OBR and NTE segments follow OBX segments with OBX-5.3 = "99NZCOLPACTION".

Colposcopy Standard	OBX-5	1	Mandatory	Where OBX-5.3 = “99NZCOLPSTANDARD”.
Colposcopy Assessment (type of visit)	OBX-5	1	Mandatory	Where OBX-5.3 = “99NZCOLPASSESSMENT”.
Lesion Present	OBX-5	1	Optional	Where OBX-5.3 = “99NZCOLPLESION”.
Biopsy Result	OBX-5	1 or more	Optional	Where OBX-5.3 = “99NZCOLPBIOPSY”.
Colposcopy Performed Indicator	OBX-5	1	Mandatory	OBX segment OBX-5 Y/N value using code "99NZCOLPPERFORMED".
Anaesthesia used	OBX-5	1	Optional	Where OBX-5.3 = “99NZCOLPANAESTHESIA”.
Number of Quadrants Involved	OBX-5	1	Conditional	Where OBX-5.3 = “99NZCOLPQUADRANT”. Required if ‘Lesion Present’ = “Y”. Codes are numeric values ”1”,”2”,”3”,”4”.
Limits of Lesion Visible	OBX-5	1	Conditional	Where OBX-5.3 = “99NZCOLPLESIONVIS”. Required if ‘Lesion Present’ = “Y”. OBX-5.1 allows “Y” or “N”.
Diagram/Photo of lesion	OBX-5	1	Optional	Where OBX-5.3 = “99NZCOLPIMAGE”. OBX-5.1 allows “Y” or “N”.
Biopsy Site	OBX-5	1	Conditional	Where OBX-3 = “21976-6^Cancer Outcome Status^LN”. Where OBX-5.3 = “99NZCOLPBIOPSYSITE”. Required if ‘Visit Actions’ = “BIO”.

If No Biopsy Reason	NTE segment	1 or more	Optional	Where NTE segments follow OBR and NTE segments follow OBX segments with an OBX record where OBX-5 ="99NZCOLPBIOPSYSITE".
Date histology specimen report received by Colposcopy service	OBX-19	1	Optional	Where OBX-5.1 and OBX-5.3 = "99NZCOLPFUPDATE".
Date Participant Informed	OBX-19	1	Optional	Where OBX-5.1 and OBX-5.3 = "99NZCOLPFUPCOMM".
Decision to treat date	OBX-19	1	Optional	Where OBX-5.1 and OBX-5.3 = "99NZCOLPFUPDECISION".
Histology specimen taken satisfactory for interpretation	OBX-5	1	Optional	OBX segment OBX-5 Y/N value using code "99NZHISTOSAT".
Recommended Follow-up Type	OBX-5	1	Optional	Where OBX-5.3 = "99NZCOLPFLWUP". Follow-up-types of 'SMT' and 'ONCOL' will not be accepted.
Follow-up Timeframe	OBX-5	1	Optional	Where OBX-5.3 = "99NZCOLPFLWTIME".

Cancellation of visits

Visit information is cancelled by supplying a message of type REF^I12 and RF1-1 "Referral Status" with value 'C'. The following fields (alongside the fields in section 10.1.1 Common reported event elements) are required in order to identify the visit being cancelled, and no additional information is stored by the NCSP Register:

Table 22: Fields required for Visit Cancellation

DATA ELEMENT	FIELD	CARDINALITY	OPTIONALITY	COMMENTS
Visit Date	PV1-44	1	Mandatory	

9.7.1 Referral accepted date

This field is used to report the date and time that the colposcopy referral was accepted and is reported in OBR-7 – Observation Date/Time and RF1-7 – Effective Date. See 3.5.3 Date and time value domain for the format of this field.

The referral accepted date must be less than or equal to the current date and time.

9.7.2 Colposcopy standard

See section 10.3.9 Colposcopy standard for details of this data element.

9.7.3 Colposcopy performed indicator

Name	Colposcopy performed indicator
Definition	This field is used to indicate whether a colposcopy was performed.
Source standards	Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.
Value domain	**99NZCOLPPERFORMED** / **Description** Y / Yes N / No
Data type	String
Layout	A
Obligation	Mandatory
Guide for use	The Colposcopy Performed Indicator is reported in OBX-5. The third value of the OBX-5 segment for Colposcopy Performed Indicator is "99NZCOLPPERFORMED". When submitting this information, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6 Cancer Outcome Status. If the Colposcopy Performed Indicator is not populated, then the Colposcopy Performed Indicator can be inferred. Set the Colposcopy Performed Indicator to "Y" if: • Transformation Zone Visibility is set to any value (not null); OR • Colposcopy Appearance is set to any value (not null); OR • Visit Actions exclude "HYST" and "SUBH" AND Visit Actions do not consist only of "REV", "TRT", and/or "OTHR". Otherwise set the Colposcopy Performed Indicator to "N".
Verification rules	A maximum of one **Colposcopy Performed Indicator** can be reported.

9.7.4 Colposcopy site

<table>
<tr><td>Name</td><td>Colposcopy site</td></tr>
<tr><td>Definition</td><td>This field is used to describe the site of the specimen.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPBIOPSYSITE code</th><th>Description</th></tr>
<tr><td>R</td><td>Cervical</td></tr>
<tr><td>V</td><td>Vaginal</td></tr>
<tr><td>B</td><td>Both</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Conditional. Mandatory if 10.3.4 Colposcopy Performed Indicator = “Y”.</td></tr>
<tr><td>Guide for use</td><td>The Colposcopy Site is reported in OBX-5.
The following should be used when messaging the above information:
• The LOINC code in the OBR-4 segment is 21976-6^Cancer Outcome Status^LN.
• The LOINC code in the OBX-3 segment is 19763-2^Specimen Site^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one colposcopy site can be reported.</td></tr>
</table>

9.7.5 Colposcopic appearance

<table>
<tr><td>Name</td><td>Colposcopic appearance</td></tr>
<tr><td>Definition</td><td>This field is used to describe the colposcopic appearance.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPAPR</th><th>Description</th></tr>
<tr><td>NRML</td><td>Normal</td></tr>
<tr><td>ABML</td><td>Abnormal</td></tr>
<tr><td>INCON</td><td>Inconclusive</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Conditionally mandatory if a Colposcopy is performed (Colposcopy Performed Indicator = “Y”).</td></tr>
<tr><td>Guide for use</td><td>The Colposcopic Appearance is reported in OBX-5. The third value in the OBX-5 is “99NZCOLPAPR”
When sending this information in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one appearance value can be reported.</td></tr>
</table>

9.7.6 Transformation zone visibility

<table>
<tr><td>Name</td><td>Transformation zone visibility</td></tr>
<tr><td>Definition</td><td>This field is used to describe the level of visibility of the transformation zone.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme
Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPTZ</th><th>Description</th></tr>
<tr><td>COMPL</td><td>Completely</td></tr>
<tr><td>PART</td><td>Partially</td></tr>
<tr><td>NVIS</td><td>Not Visible</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Conditionally mandatory if a colposcopy is performed and the site is ‘Cervical’ or ‘Both’.</td></tr>
<tr><td>Guide for use</td><td>Should not be used if a colposcopy is performed and the site is ‘Vaginal’.
The Transformation Zone Visibility is reported in OBX-5. The third value in the OBX-5 segment for Transformation Zone Visibility is “99NZCOLPTZ”.
When sending this information in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one Transformation Zone Visibility value can be reported.</td></tr>
</table>

9.7.7 Squamocolumnar junction visibility

<table>
<tr><td>Name</td><td>Squamocolumnar junction visibility</td></tr>
<tr><td>Definition</td><td>This field is used to describe the level of visibility of the squamocolumnar junction.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>Code (99NZCOLPSCJ)</th><th>Description</th></tr>
<tr><td>COMPL</td><td>Completely</td></tr>
<tr><td>PART</td><td>Partially</td></tr>
<tr><td>NVIS</td><td>Not Visible</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Conditionally mandatory if 9.7.4 Colposcopy site has a response of "R" or "B".</td></tr>
<tr><td>Guide for use</td><td>Should not be used if a colposcopy is performed and the site is ‘Vaginal’.
The Squamocolumnar Junction Visibility is reported in OBX-5. The third value in the OBX-5 segment for Squamocolumnar Junction is ”99NZCOLPSCJ”.
When submitting messaging for this information, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one Squamocolumnar Junction Visibility value can be reported.</td></tr>
</table>

9.7.8 Lesion present

<table>
<tr><td>Name</td><td>Lesion present</td></tr>
<tr><td>Definition</td><td>This field is used to report whether a lesion(s) was observed to be present, as yes or no, irrespective of whether any lesion seen is benign or worse, for example, for benign: endometriosis, benign polyp.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPLESION</th><th>Description</th></tr>
<tr><td>Y</td><td>Yes</td></tr>
<tr><td>N</td><td>No</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>A</td></tr>
<tr><td>Obligation</td><td>Optional</td></tr>
<tr><td>Guide for use</td><td>The Lesion Present is reported in OBX-5. The third value in OBX-5 for Lesion Present is “99NZCOLPLESION”.
When submitting this information in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one value can be reported.</td></tr>
</table>

9.7.9 Limits of lesion visible

<table>
<tr><td>Name</td><td>Limits of lesion visible</td></tr>
<tr><td>Definition</td><td>This field is used to report whether the limits of the lesion(s) were visible.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td><table><tr><th>99NZCOLPLESIONVIS</th><th>Description</th></tr><tr><td>Y</td><td>Yes</td></tr><tr><td>N</td><td>No</td></tr></table></td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>A</td></tr>
<tr><td>Obligation</td><td>Conditionally mandatory if ‘Lesion present’ is “Y”</td></tr>
<tr><td>Guide for use</td><td>The Limits of Lesion Visible is reported in OBX-5. The third value of the OBX-5 segment for Limits of Lesion Visible is “99NZCOLPLESIONVIS”.
When submitting this information in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one value can be reported.</td></tr>
</table>

9.7.10 Number of quadrants involved

Name	Number of quadrants involved
Definition	This field is used to report how many quadrants of the cervix were found to be affected.
Source standards	Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.
Value domain	99NZCOLPQUADRANT 1 2 3 4
Data type	String
Layout	N(18)
Obligation	Conditionally mandatory if 9.7.8 Lesion present is "Y"
Guide for use	The Number of Quadrants Involved is reported in OBX-5. In the third value of OBX-5 for Number of Quadrants Involved is "99NZCOLPQUADRANT". When sending the information above in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6 Cancer Outcome Status.
Verification rules	A maximum of one value can be reported.

9.7.11 Predicted abnormality grade

<table>
<tr><td>Name</td><td>Predicted abnormality grade</td></tr>
<tr><td>Definition</td><td>This field is used to report the grade or level of abnormality of the most severe lesion observed during the visual examination/assessment conducted during this visit.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPGRADE</th><th>Description</th></tr>
<tr><td>CAN</td><td>Invasive cancer</td></tr>
<tr><td>MCAN</td><td>Micro-invasive cancer</td></tr>
<tr><td>AIS</td><td>Glandular</td></tr>
<tr><td>H</td><td>High grade squamous</td></tr>
<tr><td>L</td><td>Low grade squamous</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Conditional. Mandatory if a 9.7.5 Colposcopic Appearance = ABML (Abnormal), otherwise it is not to be provided.</td></tr>
<tr><td>Guide for use</td><td>The Predicted Abnormality Grade is reported in OBX-5. The third value in the OBX-5 segment for Predicted Abnormality Grade is “99NZCOLPGRADE”.
When sending the information above in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6 Cancer Outcome Status.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one predicted abnormality grade can be reported.</td></tr>
</table>

9.7.12 Visit actions

<table>
<tr><td>Name</td><td>Visit action</td></tr>
<tr><td>Definition</td><td>This field is used to report any actions taking during a visit.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme
Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPACTION</th><th>Description</th></tr>
<tr><td>NACT</td><td>No action at this time</td></tr>
<tr><td>RPT</td><td>Cervical/Vaginal smear</td></tr>
<tr><td>REV</td><td>Review/results discussed</td></tr>
<tr><td>TRT</td><td>Arranged treatment</td></tr>
<tr><td>PCH</td><td>Punch Biopsy</td></tr>
<tr><td>ELCT</td><td>Wireloop Excisional Procedure</td></tr>
<tr><td>LASA</td><td>Laser ablation</td></tr>
<tr><td>LASE</td><td>Laser cone</td></tr>
<tr><td>CKNF</td><td>Cold knife cone biopsy cervix</td></tr>
<tr><td>HYST</td><td>Total hysterectomy</td></tr>
<tr><td>OTHR</td><td>Other</td></tr>
<tr><td>HPV</td><td>hrHPV test</td></tr>
<tr><td>SUBH</td><td>Sub total hysterectomy</td></tr>
<tr><td>BIO</td><td>Biopsy Performed</td></tr>
<tr><td>TTV</td><td>Treatment this visit</td></tr>
<tr><td>ABL</td><td>Ablation by means other than laser</td></tr>
<tr><td>DIC</td><td>Diathermy Cone</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Mandatory if a visit has been attended.</td></tr>
</table>

Guide for use	The Visit Actions are reported in OBX-5. The third value in the OBX-5 segment for Visit Actions is "99NZCOLPACTION". When sending the information above in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN. Note that if no biopsy is performed then the reason must be stated. More information on this can be found in the Cervical Implementation Specification.
Verification rules	Multiple actions can be reported.

9.7.13 Biopsy site

Name	Biopsy site
Definition	This field is used to report the site that the biopsy was taken from.
Source standards	Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.
Value domain	99NZCOLPBIOPSYSITE Code / Description R – Cervical V – Vaginal B – Both
Data type	String
Layout	X(18)
Obligation	Conditionally mandatory if a response to Visit Actions = "BIO"
Guide for use	The Biopsy Site is reported in OBX-5. The third value in the OBX-5 segment for Biopsy Site is "99NZCOLPBIOPSYSITE". When sending the information above in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^CancerOutcome Status^LN.
Verification rules	A maximum of one biopsy site can be reported.

9.7.14 Biopsy result

<table>
<tr><td>Name</td><td>Biopsy result</td></tr>
<tr><td>Definition</td><td>This field is used to report the biopsy result/s.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme
Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPBIOPSY</th><th>Description</th></tr>
<tr><td>NEG</td><td>Negative</td></tr>
<tr><td>CIN1</td><td>CIN1/HPV</td></tr>
<tr><td>CIN2</td><td>CIN2</td></tr>
<tr><td>CIN2-3</td><td>CIN2/3</td></tr>
<tr><td>CIN3</td><td>CIN3</td></tr>
<tr><td>AIS</td><td>AIS</td></tr>
<tr><td>AC</td><td>Adenocarcinoma</td></tr>
<tr><td>SC</td><td>Squamous Carcinoma</td></tr>
<tr><td>ASC</td><td>Adenosquamous carcinoma</td></tr>
<tr><td>OTH</td><td>Other</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td></td><td>N(18)</td></tr>
<tr><td>Obligation</td><td>Optional</td></tr>
<tr><td>Guide for use</td><td>The Biopsy Result is reported in OBX-5. The third value in the OBX-5 segment for Biopsy Result is “99NZCOLPBIOPSY”.
When sending the information above in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>Multiple biopsy results can be reported.</td></tr>
</table>

9.7.15 Colposcopy assessment (type of visit)

Refer to the value domain, OBX-5 reporting requirements and the verification rules of 9.3.8 Colposcopy assessment (type of visit). When reporting this information for 'Visits', the messaging should include the LOINC code in the OBR-4 segment and the OBX-3 segment of 21976-6^Cancer Outcome Status^LN.

9.7.16 Anaesthesia used

<table>
<tr><td>Name</td><td>Anaesthesia used</td></tr>
<tr><td>Definition</td><td>This field is used to report any anaesthesia used during the visit.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPANAESTHESIA</th><th>Description</th></tr>
<tr><td>LOCAL</td><td>Local</td></tr>
<tr><td>GEN</td><td>General</td></tr>
<tr><td>NA</td><td>N/A</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Optional</td></tr>
<tr><td>Guide for use</td><td>The Anaesthesia Used is reported in OBX-5. The third OBX-5 segment for Anaesthesia Used is "99NZCOLPANAESTHESIA".
When sending the information above in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one anaesthesia can be reported.</td></tr>
</table>

9.7.17 Diagram/photo of lesion

Name	Diagram/photo of the lesion indicator
Definition	This field is used to report whether a diagram/photo of the lesion is available.
Source standards	Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.
Value domain	99NZCOLPIMAGE: Y = Yes; N = No
Data type	String
Layout	A
Obligation	Optional
Guide for use	The Diagram/Photo of Lesion is reported in OBX-5. The third OBX-5 segment for Diagram/Photo of Lesion is "99NZCOLPIMAGE". When sending the information above in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.
Verification rules	A maximum of one value can be reported.

9.7.18 Date histology specimen report received by colposcopy service

This field is used to report the date and time the histology specimen report was received by the colposcopy service. This is reported in OBX-19 –Date/Time of the Analysis. See 3.4.3 Date and time value domain for the format of this field.

When sending this information in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment include 21976-6^Cancer Outcome Status^LN.

The OBX-5 segment should contain the value = "99NZCOLPFUPDATE" with the format as documented under the heading of RSD Messages in the OBX-5 – 5 Observation Value section.

A maximum of one date can be reported.

9.7.19 Date participant informed

This field is used to record the date and time the diagnosis was communicated to the participant. This is reported in OBX-19 –Date/Time of the Analysis. See 3.4.3 Date and time value domain for the format of this field.

When sending this information in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment include 21976-6^Cancer Outcome Status^LN.

The OBX-5 segment should contain the value = "99NZCOLPFUPCOMM" with the format as documented under the heading of RSD Messages in the OBX-5 – 5 Observation Value section

A maximum of one date can be reported.

9.7.20 Decision to treat date

This field is used to record the date and time the participant agreed to be treated or the date and time the clinician decided that the participant would receive a treatment. This is reported in OBX-19 –Date/Time of the Analysis. See 3.4.3 Date and time value domain for the format of this field.

When sending this information in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment include 21976-6^Cancer Outcome Status^LN.

The OBX-5 segment should contain the value = "99NZCOLPFUPDECISION" with the format as documented under the heading of RSD Messages in the OBX-5 – 5 Observation Value section.

A maximum of one date can be reported.

9.7.21 Histology specimen taken satisfactory for interpretation

<table>
<tr><td>Name</td><td>Histology specimen taken satisfactory for interpretation</td></tr>
<tr><td>Definition</td><td>This field is used to report whether the follow-up histology specimen taken is satisfactory for interpretation.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZHISTOSAT</th><th>Description</th></tr>
<tr><td>Y</td><td>Yes</td></tr>
<tr><td>N</td><td>No</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>A</td></tr>
<tr><td>Obligation</td><td>Optional</td></tr>
<tr><td>Guide for use</td><td>The Histology Specimen Taken Satisfactory for Interpretation is reported in OBX-5. The third value in the OBX 5 for Histology Specimen Taken Satisfactory for Interpretation is “99NZHISTOSAT”.
When sending this information in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one value can be reported.</td></tr>
</table>

9.7.22 Recommended follow-up type

<table>
<tr><td>Name</td><td>Recommended follow-up type</td></tr>
<tr><td>Definition</td><td>This field is used to report the recommended follow-up type.
This indicates who the participant should be discharged to.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme
Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPFLWUP</th><th>Description</th></tr>
<tr><td>COLP</td><td>Colposcopist</td></tr>
<tr><td>NS</td><td>Not Stated</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Optional</td></tr>
<tr><td>Guide for use</td><td>The Recommended Follow-up Type is reported in OBX-5. The third value of the OBX-5 segment for Recommended Follow-up Type is “99NZCOLPFLWUP”.
When sending this information in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one follow-up type can be reported.</td></tr>
</table>

9.7.23 Follow-up timeframe

This field is used to report the follow-up timeframe. See the table in 10.3.6 Follow-up timeframe for acceptable values.

The Follow-up Timeframe is reported in OBX-5. The third value in the OBX-5 is "99NZCOLPFLWTIME".

When sending this information in a Visit message the OBR-4 segment and the OBX-3 segment include 21976-6^Cancer Outcome Status^LN.

9.7.24 Admission type

This field is used to report the participant admission type. See PV1-2 – Patient Class for relevant values. A maximum of one admission type can be reported.

9.7.25 Visit date

This field is used to report the date and time that the visit occurred. This is reported in PV1-44 –Admit Date/Time. See 3.5.3 Date and time value domain for the format of this field. A maximum of one visit date can be reported.

9.8 DNAs and Future Appointments

DNA event information is sent in a DNA message with PV2-8 containing the date of the intended visit.

Reported elements should be included as listed below. Note that all OBX data will follow a "Cancer Outcome Status" OBR.

Table 23: Reported Fields for DNAs and Appointments

DATA ELEMENT	FIELD	CARDINALITY	OPTIONALITY	COMMENTS
Referred To Health Practitioner	PRD-7	1	Mandatory	Where PRD-1 = "RT". It is mandatory to provide the Health Practitioner who the participant saw or who was booked to see.
Result Status	OBR-25	1	Mandatory	When the Result Status is Final: • Save it, if there is no Final version of this event for the participant. • Reject it, if there already is a Final version of this event for the participant. When the Result Status is Change: • Save it, regardless. When the Result Status is not Final, Change or Cancel: • Don't save, just acknowledge receipt.
Referral Type	RF1-3	1	Mandatory	Can be: "DNA" – Did Not Attend.
Referral Number	RF1-6	1	Mandatory	
Booked Appointment	PV1-44	1	Mandatory	The Visit Date has to be on or earlier than the current date.
Date of Intended Visit (DNA)	PV2-8	1	Optional	For DNA – the Visit Date has to be on or later than the current date.

Intended Visit Purpose	OBX-5.1 and OBX-5.2	1	Mandatory	Where OBX-5.3 = “99NZCOLPPURP”. Field is mandatory for DNA message.
Reason for DNA	OBX-5.1 and OBX-5.2	1	Optional	Where OBX-5.3 = “99NZCOLPDNAREASON”.
If Other Reason	NTE segment	1	Optional	Where NTE segments follow OBX segment where OBX-5 = ”99NZCOLPDNAREASON”.
Colposcopy Standard	OBX-5	1	Mandatory	Where OBX-5.3 = “99NZCOLPSTANDARD”.
Follow-up Timeframe	OBX-5	1	Optional	Where OBR-4 includes “Cancer Outcome Status” and OBX-5.3 = “99NZCOLPFLWTIME”.
Follow-Up Notes	NTE segment	1 or more	Optional	Where NTE segments follow OBX segment where OBX-5.

Cancellation of DNA and appointment information

DNA and appointment information is cancelled by supplying a message of type REF^I12 and RF1-1 "Referral Status" with value 'C'. The following fields (alongside the fields in section 9.1.1 Common reported event elements) are required in order to identify the DNA or appointment being cancelled, and no additional information is stored by the NCSP Register:

Table 24: Fields required for Referral Deletion

DATA ELEMENT	FIELD	CARDINALITY	OPTIONALITY	COMMENTS
Booked Appointment	PV1-44	1	Mandatory	
Rescheduled Appointment Date	PV2-8	1	Optional	

9.8.1 Referral accepted date

This field is used to report the date and time that the colposcopy referral was. This is reported in OBR-7 – Observation Date/Time. See 3.4.3 Date and time value domain for the format of this field.

The referral accepted date must be less than or equal to the current date.

9.8.2 Booked appointment date

This field is used to report the date and time that the visit was originally booked. This is reported in PV1-44 –Admit Date/Time. See 3.4.3 Date and time value domain for the format of this field. A maximum of one visit date can be reported.

The booked appointment date must be less than or equal to the current date.

9.8.3 Intended visit purpose

<table>
<tr><td>Name</td><td>Intended visit purpose</td></tr>
<tr><td>Definition</td><td>This field is used to report the intended purpose of the visit and is only used for DNA.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPPURP</th><th>Description</th></tr>
<tr><td>FSA</td><td>First specialist assessment</td></tr>
<tr><td>TRE</td><td>Treatment</td></tr>
<tr><td>FOU</td><td>Follow-up</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Mandatory</td></tr>
<tr><td>Guide for use</td><td>The Intended Visit Purpose is reported in OBX-5. The third value in the OBX-5 segment for Intended Visit Purpose is “99NZCOLPPURP”.
When sending this information in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one visit purpose can be reported.</td></tr>
</table>

9.8.4 Follow-up timeframe

This field is used to report the follow-up timeframe. See the table in 9.3.6 Follow-up timeframe for acceptable values.

The Follow-up Timeframe is reported in OBX-5. The third value in the OBX-5 is “99NZCOLPFLWTIME”.

When sending this information in a message the OBR-4 segment and the OBX-3 segment include 21976-6^Cancer Outcome Status^LN.

9.8.5 Reason for DNA

<table>
<tr><td>Name</td><td>Reason for DNA</td></tr>
<tr><td>Definition</td><td>This field is used to report the reason the participant did not attend the visit/appointment.</td></tr>
<tr><td>Source standards</td><td>Health NZ. 2023. National Cervical Screening Programme Policies and Standards: Section 6 – Providing a Colposcopy Service.</td></tr>
<tr><td>Value domain</td><td>
<table>
<tr><th>99NZCOLPDNAREASON</th><th>Description</th></tr>
<tr><td>TRANS</td><td>Transport</td></tr>
<tr><td>COA</td><td>Change of address</td></tr>
<tr><td>PREG</td><td>Pregnant</td></tr>
<tr><td>MENST</td><td>Menstruation</td></tr>
<tr><td>REFUSE</td><td>Refusal</td></tr>
<tr><td>OTH</td><td>Other</td></tr>
</table>
</td></tr>
<tr><td>Data type</td><td>String</td></tr>
<tr><td>Layout</td><td>X(18)</td></tr>
<tr><td>Obligation</td><td>Optional</td></tr>
<tr><td>Guide for use</td><td>The Reason for DNA is reported in OBX-5. The third value in the OBX-5 segment for Reason for DNA is “99NZCOLPDNAREASON”.
When sending this information in a message, the LOINC code in the OBR-4 segment and the OBX-3 segment is 21976-6^Cancer Outcome Status^LN.</td></tr>
<tr><td>Verification rules</td><td>A maximum of one reason can be reported.</td></tr>
</table>

9.8.6 Colposcopy standard

For the format of this data element, see 9.3.9 Colposcopy standard.

9.8.7 Date of intended visit

This field is used to report the date and time that the visit occurred. This is reported in PV2-8 –Expected Admit Date/Time. See 3.4.3 Date and time value domain for the format of this field. A maximum of one visit date can be reported.

The date of intended visit must be more than or equal to the current date and time.

9.9 Additional processes

The RSD implementation guide published by HISO does not cover some situations, particularly the cases where messages have been sent in error and need correcting. Supplementary information is also provided on how to convey appointment information.

In all cases where a message is sent as an update or cancellation then the following fields must be the same as originally supplied in order that the NCSP Register can identify the event information as being for an event already received:

- Referral Number
- Referring Facility
- Referred To Facility
- In some cases, the Visit/Appointment Date (PV1-44 or PV2-8 as applicable)

9.9.1 Did not attend correction

In this scenario it has been incorrectly reported that the participant did not attend for an appointment: This message is the equivalent of the "DNA" but the RF1-1 in the request message is "C" for cancelled. The visit identification information (including PV2-8 for appointment date) must be the same as the original DNA message. If a DNA cancellation message has not been received but a subsequent message is received containing visit information for the same appointment time, then the cancellation of the DNA can be inferred if it has the same referral number and is from the same facility.

Table 25: Did Not Attend Cancellation Sequence

	MSH-9	RF1-1	RF1-3	RF1-4	CONTAINING CLINICAL DATA
Event	REF^I12	C	DNA	--	Yes
Response	RRI^I12	A		--	No

9.9.2 Cancel status update

In this scenario incorrect information has been sent in a status message. This can only be cancelled if it can be identified by it being associated with an appointment as there would only be one status update for an appointment. The visit identification information (including PV1-44 for visit date) must be the same as the original status message.

Table 26: Status Message Cancellation Sequence

	MSH-9	RF1-1	RF1-3	RF1-4	CONTAINING CLINICAL DATA
Event	REF^I14	C	d	--	Yes
Response	RRI^I12	A		--	No

9.9.3 Permitted Amendment Messages

There is no provision to amend the initial referral or the subsequent discharge summary as they are too complex to identify the items that need changing. These need to be cancelled and new ones resent.

In the case of a status message that reports a visit or a DNA then it is feasible to make minor amendments such as the list of colposcopy actions. If the visit identification information (including PV1-44 for visits that have occurred or PV2-8 for visits that were planned) is identical to the original status message then the reported information can replace that previously reported.

Where a discharge summary or discharge referral contained a visit event, and both are to be cancelled, two messages must be sent. One to cancel the referral, and one to cancel the visit status update.

Where an update is required to a previously sent message containing Visit, Appointment or DNA information, and the update would modify any one or more of the fields required to identify a visit event (Referral Number, Referring Facility, Referred From Facility, Visit/Appointment Date), the originally sent event information must first be cancelled, and then the correct information sent as a separate message recreating the visit, appointment or DNA event.

9.9.4 Clarification of Appointment Date Fields

If reporting an event that has not happened, such as a future appointment, or a DNA, then the date is carried in PV2-8 segment. If the event has occurred, then the visit date that is being reported is carried in the PV1-44 segment. In the case of the original referral the date reported is the date of the appointment that gave rise to the referral and not a suggested appointment date. Note that, for technical implementation reasons, Referral for Treatment messages do not support the PV1 and PV2 segment types so OBX segments are used instead.

HL7 Messaging

The following sections in this document must be read in conjunction with the relevant HISO standards:

- HISO 10008.1:2015 Pathology and Radiology Implementation Guide
- HISO 10008.2:2015 Pathology and Radiology Messaging Standard
- HISO 10011.1:2007 Referrals, Status and Discharges, Business Process*
- HISO 10011.2:2007 Referrals, Status and Discharges, Messaging Standard*
- HISO 10011.3:2007 Referrals, Status and Discharges Implementation Guide*

Note: The Referrals, Status and Discharges documents are marked as 'contained' standards. For the purposes of this implementation guide, these standards still apply until a suitable replacement has been published.

The abovementioned standards are used for reporting cervical screening information into the National Screening Solution. The following sections include details of HL7 2.4 messaging that is specific to cervical screening information being submitted into the NSS that *differs* from the standards above.

10.Business processes

Along with specific details documented in the previous data elements, the following provides details for submitting information into the NSS for the National Cervical Screening Programme.

The NCSP Register will have interfaces with labs and colposcopy clinics. The communication between the NCSP Register and these entities enables the exchange of information related to participants' data in the areas of test results, referral statuses, and some other additional information.

10.1 Information exchange with the NSS

10.1.1 Communications with laboratories

Laboratories will transmit cervical screening results to the NCSP Register using HL7 version 2.4 messages, in line with the HISO 10008 Pathology and Radiology Messaging Standard. This includes:

- HPV Test Results
- Cytology Test Results
- Histology Test Results

These messages will include demographic information as well as the details of the test result itself.

The National Screening Unit accepts data as standard unsolicited results (ORU) but restricts some fields to specific ranges of values. In the HISO 10008 Pathology and Radiology Messaging Standard, some fields are deemed optional, and these may differ to the optionality in this document as they may be mandatory when sending data to the NSS.

As most messages to the NSS are copies of messages, the original recipient is lost from the message header. For this reason, all messages must have values for the facility codes in OBR-46 (placer facility code) and OBR-47 (filler facility code) where the name of the coding system is HF for HPI.

Only segments MSH, MSA, ERR, NTE, PID, OBR and OBX will be processed; any others will be discarded for ORU messages.

Where multiple results are to be reported in OBX segments, each individual result must be reported in separate OBX segments, rather than as repeats of OBX-5, even if they are for the same result type. For example, where more than one interpretation code is supplied, those interpretation codes must be included in separate OBX segments. Multiple alternate identifiers for the same result are allowed as repeats in OBX-5, so long as exactly one uses a coding system supported by the NSS.

Where multiple OBX occur with the same code in OBX-3, then sub-ids will need to be used in OBX-4 starting at 1 and incrementing by 1 for each subsequent OBX in a set.

For example:

```
OBX|1|CE|19763-2^Specimen Site^LN||.....
OBX|2|CE|19772-3^Preparation Technique^LN||.....
OBX|3|CE|19766-4^Statement of Adequecy^LN|1|.....
OBX|4|CE|19766-4^Statement of Adequecy^LN|2|.....
OBX|5|CE|19762-4^General Category^LN||.....
OBX|6|CE|19765-7^Interpretation^LN|1|.....
OBX|7|CE|19765-7^Interpretation^LN|2|.....
OBX|8|CE|19765-7^Interpretation^LN|3|.....
```

10.1.2 Communications with specialists

The following transactions should be generated from within a clinical system and the cervical screening HL7 version 2.4 messages sent to the NSS:

- Referral Status – notification of receipt
- Referral Status – appointment data
- Referral Status – "Did Not Attend"
- Clinical Update – Relevant clinical notes from an examination
- Discharge summary

The NSS should be sent RSD messages of the types described in the table below. These will typically be copies of the RSD messages flowing between healthcare organisations. Other RSD message types, not included in the table, that are passed between organisations in relation to a participant's care, should not be copied to the NSS.

Table 27: RSD Message types for NCSP

VALUE	DESCRIPTION
DRF	A Discharge Referral gives notification that a participant has been forward referred to another health provider, e.g. from a colposcopist to an oncologist, and may contain visit information.
DIS	A Discharge Summary may contain visit details from a specialist visit event and also acts as a referral back to a health provider from the specialist, e.g. the original sample taker.
MED	Medical Referral, notify of a participant being referred to a specialist, e.g. colposcopist or oncologist, from regular health provider or sample taker.
DNA	Notification from 'referred-to' provider, that the participant did not attend the appointment. This may include details of a rescheduled appointment.
NOT, SRP	Notification and Status Report messages contain details of a participant event which has occurred. In the context of the NCSP Register these messages are a notification from a specialist back to the referring health provider, on completion of a participant event such as a visit to the specialist.

Most of the processes around reporting these types of RSD messages are described in the RSD implementation guide. Section 11 describes some processes that are specific to the NSS, and code set requirements that are specific to the National Cervical Screening Programme.

As most messages to the NSS are copies of messages the original recipient is lost from the message header. For this reason all messages must have values in the Provider Identifier fields (PRD-7). These identifiers must include the Common Person Number (CPN) and the facility code. The facility codes must be provided for both the referrer and the facility referred to. There must be a PRD segment for the referrer and the referred to provider in all REF messages. The NCSP Register uses Date/Time of the Analysis (OBX-19) for reporting date and time information associated with event information.

All "dates" are required to be a complete date and time even though the standard allows for dates only.

Where multiple results are to be reported in OBX segments, each individual result should be reported in separate OBX segments, rather than as repeats of OBX-5, even if they are for the same result type. For example, where more than one action was taken during a colposcopy visit, those actions must be included in separate OBX segments. Multiple alternate identifiers for the same result are allowed as repeats in OBX-5, as long as exactly one uses a coding system supported by the NSS.

Table 135 in the RSD messaging standard is a user defined table for PV1-2 (Patient Class) and has the additional value of D (day case) for reporting to the NCSP Register. However it is recommended that the value of I (Inpatient) is used and reliance is placed on PV1-44 (admit date) and PV1-45 (discharge date) to indicate a Day Case.

Table 85 in the RSD messaging standard is a user defined table for NTE-4 (Comment Type). The NCSP Register defines an additional value of OC (Optional Clarification) for reporting clarification of code-values such as for OTHER booking priority or OTHER method of referral. In some cases this clarification text is mandatory.

Discharge messages sent with visit information indicate that the participant has been discharged from the colposcopist. The 'Recommended Follow-up Type' value should state who the participant has been discharged to.

Discharge messages sent without visit information indicate that the referral has been rejected by the colposcopist.

10.1.3 Reporting additional information using HL7 messaging

The NCSP Register will also receive additional medical information that is reported via HL7 messages. Additional medical information that will be accepted is pregnancy and immune deficient status.

Reporting of other types of additional medical information (such as exposure to DES and HPV vaccination status) via HL7 will not be supported.

Additional information is sent in messages using the following LOINC codes in OBR/OBX groups. All OBX for one type of information must be reported under one OBR. All dates for the start or finish of the events listed below are recorded in OBR-7 except for delivery date for pregnancy status. It is not expected that the additional information below would be reported on its own in a separate message, – that is, they would only be received as additional information in another HL7 message.

Table 28: Additional Information LOINC Codes

INFORMATION	OBR-4	OBX-3	OBX-5
Pregnancy	11449-6 Pregnancy status	11778-8^Delivery Date^LN Note: If Date not available then omit the OBX segment. It should be calculated as OBR-7 + 12 months.	Date (use HL7 DT type)
Immune Deficient	28634-4 Miscellaneous Studies	XNZ0510^Immune function status^NZPOCS Note: this is not a LOINC code but a NZPOCS code	Data type: CE HL7 table 0136 (Y) Y = immune deficient N = not immune deficient

Note: Where there is a change in immune function status (e.g. no longer considered immune deficient) we would expect the OBR to have a 'C' state and the OBX to have a 'N' state. If pregnancy or immune deficient was sent incorrectly we would expect an 'X' state.

Example Messages:

Pregnancy Status

```
OBR|1|ORD000016|07877|11449-6^Pregnancy
Status^LN|||200607011633|||||||200607051633||013427^DOCTOR^Ordering^M^^Dr^^^
NZLMOH^^^^HI ||||||||OTH|F|||||||||||||||||||FZZ999^^HF|FXX888^^HF
```

```
OBX|1|DT|11778-8^Delivery Date^LN||20081224||||||F
```

Immune Deficient Status

```
OBR|1|ORD000016|07877|28634-4^Miscellaneous
Studies^LN|||200607011633|||||||200607051633||013427^DOCTOR
^Ordering^M^^Dr^^^NZLMOH^^^^HI||||||||OTH|F||^^^20001226|||||||||||||||||||F
ZZ999^^HF|FXX888^^HF
```

```
OBX|1|CE|XNZ0510^Immune function status^NZPOCS||Y^ Yes^HL70136||||||F
```

10.1.4 Web services interface for transferring HL7 messages

This section describes the use of a web services interface (WSI) to send and receive HL7 messages over the Health Intranet. It covers the interface, encryption, digital certificates and the required technical environment for the electronic submission of HPV, cytology and histology results from labs, and RSD messages from colposcopy clinics.

This document section is broken into the following parts:

1. **Core Concepts:** Introduces the concepts that need to be understood to aid comprehension of the other sections.
2. **Technical Implementation Guide:** Provides detailed information about the interface
3. **Supported Cryptography Standards:** Describes the cryptographic standards that will be supported in conjunction with the security aspect of messaging.
4. **Technical Environment:** Describes the technical environment that will be provided for production and testing.
5. **Specifications and Samples:** Provides the technical specifications such as schemas, WSDL definitions, and sample files.

Relation to interface proposal document

In early 2007 the NCSP issued a document describing a proposed web services interface for the new NCSP Register. This document provides additional technical detail and has removed items that were originally identified as being “phase 2”. This document no longer includes any proposed or future developments. The structure of the messages has also been simplified based on feedback from health providers. This interface will continue to be used by the new NCSP Register for the foreseeable future.

Core Concepts

This section introduces the concepts that need to be understood to aid comprehension of the other sections.

Messages

A message in the context of the NCSR-WSI is a block of HL7 transported as the body of a SOAP messages over HTTPS. The HL7 encoded content can be anything that complies with HL7 v2.4. Multiple HL7 messages may be transported over a single web services call.

The following example illustrates a message in the content of the NCSP-R-WSI:

```
<?xml version="1.0" encoding="UTF-8" ?>
<HL7 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0
public_html/WEB-INF/wsdl/hl7.xsd"
   xmlns="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0">
 <Message>
   <![CDATA[
      MSH|^~\&|AcmeGPsystem|MyGP|PMS5|MyColp|20071027091513|PKI|ORU^R01…
PID|1||AAA1234^^NHI^NZLMOH||Sample^Gertrude^^Mrs||19710212||F||…
OBR|1|ORD000016|07877| RNZ0504^Gynaecological Cytology^NZPOCS…
OBX|1|CE|19763-2^Specimen Site ^LN||R^Cervical^BTH-2014||||||F
OBX|2|CE|19772-3^Preparation Techniques^LN||LBC^Liquid based cytology^BTH-2014
OBX|3|CE|19764-0^Statement of adequacy^LN||S1^The specimen is…
OBX|4|CE|19762-4^General Categories^LN||G1^Negative for…
OBX|5|CE|19765-7^Microscopic Observation^LN||O4^There are bacteria…
OBX|6|CE|19773-1^Recommendation^LN||H1^The next HPV screening test…
    ]]>
  </Message>
</HL7>
```

Note: The HL7 content has been truncated for formatting clarity

Message Exchange

The NCSP-R-WSI exposes service methods to send HL7 messages to the NCSP Register and receive HL7 messages from the Register. This can be characterised as follows:

- Messages to the Register can be sent by health providers as and when they are required.
- Messages from the Register must be polled for by the health provider

While polling has some natural inefficiency, it has the benefit that the NCSP Register provides all the required web services. Health providers need only act as clients to those web services (compared with two-way web services which would require health providers to create and expose their own web services).

Security

The NCSP-R-WSI will be secured through a combination of:

- **Transport level encryption.** Messages will be sent over the Health Intranet using a HTTPS connection.
- **Transport level authentication.** Calling organisations will be identified using the digital certificates presented for HTTPS.
- **Message level authentication.** Callers will be required to present usernames and passwords.

Authentication

The NCSP Register will require authentication of the requesting user and organisation using a combination of transport-level and message-level authentication:

- At the transport level, the health provider's Digital Certificate will be provided as part of the HTTPS protocol. This certificate will be used to identify the organisation.
- At the message level, the WS-Security protocol will be used to provide the username and password of the user within the health provider's organisation.

More detailed information is provided in the Technical Implementation Guide.

Versioning

The web service contains a version number in the URN and this will be reflected in the service end-point. In the event that a new version is released this will have a new service end-point and the old service will be maintained for a period negotiated between the NCSP Register and health providers.

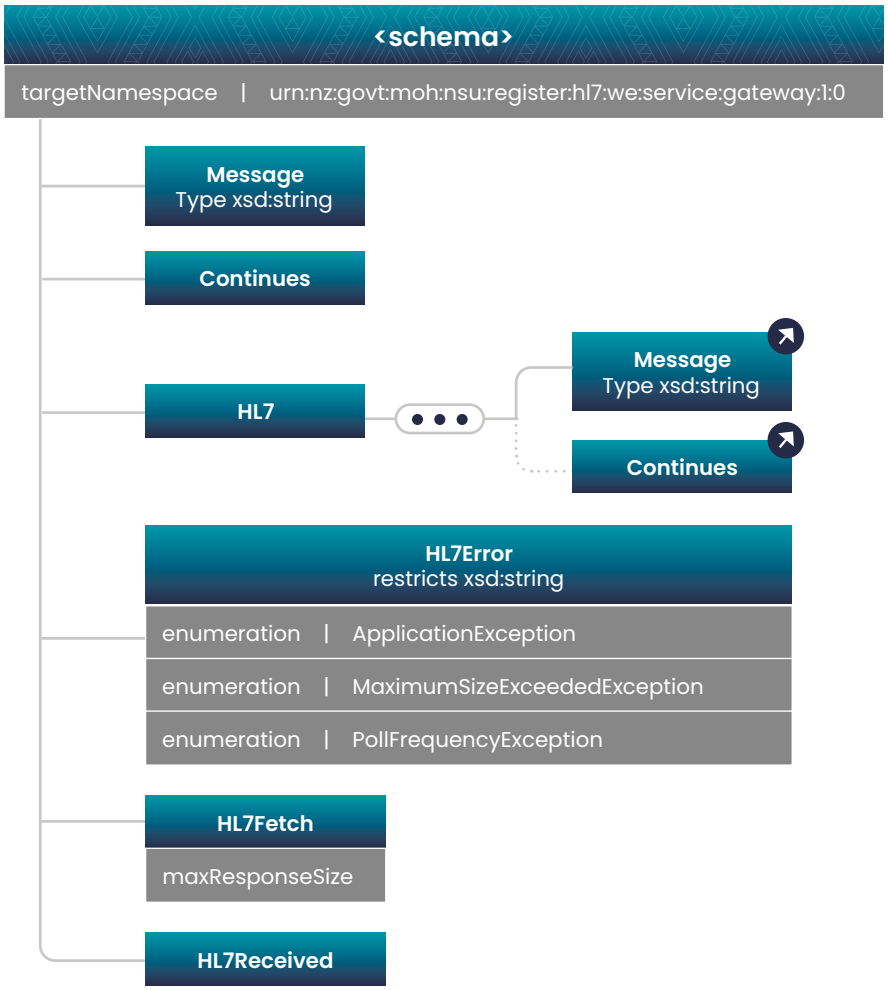
Technical Implementation Guide

This section provides the details required for health providers to implement systems to connect to the NCSP-R-WSI.

NCSP-R-WSI Schema

The schema for the NCSP-R-WSI is shown pictorially in Figure 1 and included in XML Schema Definition (XSD) format above.

Figure 1: HL7 Schema



The schema has three main elements of interest:

- **HL7:** The HL7 element defines the structure for HL7 message content sent to/from the NCSP Register. It contains two elements:
  - Message. This element contains the actual text of the HL7 to be sent. It is recommended that the HL7 content be wrapped in a CDATA section.
  - Continues. This element indicates, in a request scenario, that the NCSP Register has additional messages waiting for the caller. This can occur if the maximum message size exceeds the amount of data waiting for the caller on the NCSP Register.
- **HL7Fetch:** The HL7Fetch element defines the format of a request for HL7 messages from the NCSP Register.
- **HL7Error:** This enumeration defines the three types of errors that may be returned by the NCSP-R-WSI.

These are described in more detail in the individual services that may cause them. Refer to the relevant sections for examples that describe the individual messages.

NCSP-R-WSI WSDL

The NCSP-R-WSI WSDL defines two service end-points:

- submitHL7 – used to send HL7 messages to the NCSP Register.
- fetchHL7 – used to collect messages from the NCSP Register.

WS-Security

All messages authenticate the requesting user using the WS-Security standards to include a username token. This is described in the subsections that follow.

In describing the WS-Security requirements, examples from a compliant SOAP message have been supplied. These are only for illustrative purposes. Health providers should find that their own web services frameworks will generate all of this complex code automatically when configured for WS-Security support.

Throughout the examples, the following schema namespaces apply:

- xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd"
- xmlns:env=http://schemas.xmlsoap.org/soap/envelope/

Username Token

A username token includes a username and a password and is used to authenticate the requesting user. The user must belong to the organisation identified by the digital certificate used at the transport-layer.

Below is a fragment of a SOAP message illustrating the expected form of a properly formatted SOAP header.

```
<env:Header>
 <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-
200401-wss-wssecurity-secext-1.0.xsd" xmlns="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd"
xmlns:env="http://schemas.xmlsoap.org/soap/envelope/" env:mustUnderstand="1">
  <wsse:UsernameToken xmlns:wsse="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd"
xmlns="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-
secext-1.0.xsd">
   <wsse:Username>john.doe</wsse:Username>
   <wsse:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-
200401-wss-username-token-profile-1.0#PasswordText">furrycat</wsse:Password>
   <wsu:Created ValueType="http://www.w3.org/2001/XMLSchema/dateTime">2009-
11-10T20:40:11Z</wsu:Created>
  </wsse:UsernameToken>
 </wsse:Security>
</env:Header>
```

Services

Services are implemented using the Document Literal style.

Submit HL7 Service

The **submitHL7** service is used to send a HL7 message from the health provider to the NCSP Register. The service passes a block of HL7 to the Register. That block may contain one or more HL7 messages in accordance with normal HL7 practice. The block is not considered to be a batch and multiple messages will be treated as if they had arrived independently.

Service Definition

The service takes a single document with a HL7 element as the root (refer to the Schema) and returns either a document with a **Received** element or an error.

The following example shows a sample document passed into the submitHL7 service (note that the HL7 lines have been truncated for formatting clarity):

```
<?xml version="1.0" encoding="UTF-8" ?>
<HL7 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0
public_html/WEB-INF/wsdl/hl7.xsd"
   xmlns="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0">
 <Message>
   <![CDATA[
      MSH|^~\&|Sample Lab System|Sample Lab|NCSP-R|…
      PID||X002715^^^L^^^^~BVD4316^^NHI^NZLMOH|DOE^JANE^(JANIE)|19720831|…
      ORC|ORD000012|LAB000012||||||200607121633|||013427^DOCTOR^…
      OBR|1|ORD000012|LAB000012~123|26438-2^Cytology Studies^LN|||…
      OBX|1|CE|19764-0^Statement of adequacy^LN||UA^The specimen is …
    MSH|^~\&|Sample Lab System|Sample Lab|NCSP-R|NSU|200607121633||ORU^R01…
      PID||X002894^^^L^^^^~LLX0159^^NHI^NZLMOH|SMITH^JANE …
      ORC|ORD000026|LAB000099||||||200607121333|||013427^DOCTOR^Ordering^M^^Dr^^^NZMC
      OBR|1|ORD000012|LAB000026~144|26438-2^Cytology Studies^LN|||…
      OBX|1|CE|19764-0^Statement of adequacy^LN||UA^The specimen is…
  ]]>
 </Message>
</HL7>
```

If the submit is a success, the caller will receive an HL7 Received document. This is not an HL7 acknowledgement – it is only a transport level acknowledgement that the message was successfully transported to the NCSP Register.

The following example shows a sample HL7Received document:

```
<?xml version="1.0" encoding="UTF-8" ?>
<HL7Received xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0
public_html/WEB-INF/wsdl/hl7.xsd"
xmlns="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0"></HL7Received>
```

Service Exceptions

The submit may return one of two application level exceptions which are returned as SOAP faults (in addition to any transport level SOAP faults that may occur).

Maximum Size Exceeded Exception

Name	MaximumSizeExceededException
Meaning	The HL7 block sent to the NCSP Register exceeds the maximum size permitted.
NCSP Register Behaviour	The NCSP Register will have discarded the entire message and none of the HL7 content will be processed.
Remedy	Break the message down into smaller blocks and resend as multiple messages.

Application Exception

Name	ApplicationException
Meaning	The NCSP Register has encountered an unexpected exception condition and is unable to process the request.
NCSP Register Behaviour	The NCSP Register will have discarded the entire message and none of the HL7 content will be processed.
Remedy	Retry the send. If there are repeated failures contact the NCSP Register support staff.

Fetch HL7 Service

The **fetchHL7** service is used by the health provider to retrieve any HL7 messages generated by the NCSP Register intended for them. It is the means by which the health provider can poll the NCSP Register to retrieve HL7 messages.

Service Definition

The service takes as input a document specifying the maximum size of message supported by the caller and returns a document with an HL7 element as the root (refer to the Schema) or an error.

The **maxResponseSize** attribute refers to the size of the HL7 content only. The WS-Security encryption and SOAP headers will add to the total.

The following example illustrates the request document:

```
<?xml version="1.0" encoding="UTF-8" ?>
<HL7Fetch xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0
public_html/WEB-INF/wsdl/hl7.xsd"
     xmlns="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0"
maxResponseSize="1048576"></HL7Fetch>
```

A successful response will contain an XML document with an HL7 element as the root (refer to the Schema) as illustrated by the following example:

```
<?xml version="1.0" encoding="UTF-8" ?>
<HL7 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0
public_html/WEB-INF/wsdl/hl7.xsd"
     xmlns="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0">
 <Message>
   <![CDATA[
MSH|^~\&|NCSP-R|NSU|Sample Lab System|Sample
Lab|200704181930||ACK^R01|169729137|P|2.4^NZL^1.0
MSA|AR|PMS000022|The incoming message has been rejected due to an error.
ERR|OBR^3^46^&&HL70357~OBR^3^47^&&HL70357
   ]]>
 </Message>
</HL7>
```

If the NCSP Register has additional messages waiting, then a "continues" tag will be appended to the end of the result. This can occur if:

- the amount of HL7 data stored by the NCSP Register exceeds the **maxResponseSize** attribute supplied by the caller, and/or
- the amount of HL7 data stored by the NCSP Register exceeds the internal message size limit set by the NCSP Register.

A caller may immediately initiate a second fetchHL7 request when a "continues" element is returned by the NCSP Register.

If the NCSP Register has no messages waiting then an empty document will be returned as illustrated by this example:

```
<?xml version="1.0" encoding="UTF-8" ?>
<HL7 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0
public_html/WEB-INF/wsdl/hl7.xsd"
   xmlns="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0">
 <Message/>
</HL7>
```

Service Exceptions

The fetch may return one of two application level exceptions which are returned as SOAP Faults (in addition to any transport level SOAP faults that may occur).

Poll Frequency Exception

Name	PollFrequencyException
Meaning	The polling request is more frequent than permitted by the NCSP-R-WSI.
NCSP Register Behaviour	The NCSP Register will not process the request and no data will be returned.
Remedy	Wait until the polling period has elapsed and then make a subsequent request.

Application Exception

Name	ApplicationException
Meaning	The NCSP Register has encountered an unexpected exception condition and is unable to process the request.
NCSP Register Behaviour	The NCSP Register will have discarded the entire message and none of the HL7 content will be processed.
Remedy	Retry the send. If there are repeated failures contact the NCSP Register support staff.

Technical Environment

This section describes the technical environment that will be provided for production and testing.

Limits

The following limits have been set for the NCSP-R-WSI:

Minimum wait period between polls	60 seconds
Maximum message size	10 Mb

Health Intranet

All web service calls must come over the Health Intranet and health providers wanting to use the HL7 web services interface will need to comply with all of the network standards associated with the Health Intranet.

Specifications & Samples

NCSP-R-WSI Schema Specification:

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0"
targetNamespace="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0"
elementFormDefault="qualified">
	<xsd:annotation>
		<xsd:documentation>Defines two messages elements: HL7 - contains the HL7
		message sent from the client provider to NSU HL7fetch -
		contains the HL7 fetch method to poll for data sent from
		the client provider to NSU</xsd:documentation>
	</xsd:annotation>
	<xsd:element name="Message" type="xsd:string"/>
	<xsd:element name="Continues">
		<xsd:complexType/>
	</xsd:element>
	<xsd:element name="HL7">
		<xsd:annotation>
			<xsd:documentation>Contains HL7 message
payload</xsd:documentation>
		</xsd:annotation>
		<xsd:complexType>
			<xsd:sequence>
				<xsd:element ref="Message" maxOccurs="1"/>
				<xsd:element ref="Continues" minOccurs="0"/>
</xsd:sequence>
		</xsd:complexType>
	</xsd:element>
	<xsd:element name="HL7Error">
		<xsd:annotation>
			<xsd:documentation>Contains enumeration of error
exceptions</xsd:documentation>
		</xsd:annotation>
				<xsd:simpleType>
			<xsd:restriction base="xsd:string">
				<xsd:enumeration value="ApplicationException"/>
				<xsd:enumeration value="MaximumSizeExceededException"/>
<xsd:enumeration value="PollFrequencyException"/>
			</xsd:restriction>
		</xsd:simpleType>
	</xsd:element>
	<xsd:element name="HL7Fetch">
		<xsd:annotation>
			<xsd:documentation>Contains HL7 fetch message payload</
xsd:documentation>
		</xsd:annotation>
		<xsd:complexType>
			<xsd:attribute name="maxResponseSize" type="xsd:long"/>
		</xsd:complexType>
	</xsd:element>
	<xsd:element name="HL7Received">
		<xsd:complexType/>
	</xsd:element>

</xsd:schema>
```

NCSP-R-WSI WSDL:

```
<definitions
targetNamespace="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0"
       xmlns="http://schemas.xmlsoap.org/wsdl/"
       xmlns:tns="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0"
       xmlns:mime="http://schemas.xmlsoap.org/wsdl/mime/"
       xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/"
       xmlns:xsd="http://www.w3.org/2001/XMLSchema"
       xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"

xmlns:types="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0">
 <types>
  <xsd:schema xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/">
   <xsd:import namespace="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0"
schemaLocation="HL7WebServiceGatewayV1.0.xsd"/>
  </xsd:schema>
 </types>
 <message name="HL7Message">
  <part name="HL7" element="types:HL7"/>
 </message>
 <message name="HL7ErrorMessage">
  <part name="HL7Error" element="types:HL7Error"/>
 </message>
 <message name="HL7FetchMessage">
  <part name="HL7Fetch" element="types:HL7Fetch"/>
 </message>
 <message name="HL7ReceivedMessage">
  <part name="HL7Received" element="types:HL7Received"/>
 </message>
 <portType name="HL7WebServiceGateway">
  <operation name="submitHL7">
   <input message="tns:HL7Message"/>
   <output message="tns:HL7ReceivedMessage"/>
   <fault message="tns:HL7ErrorMessage" name="Error"/>
  </operation>
  <operation name="fetchHL7">
   <input message="tns:HL7FetchMessage"/>
   <output message="tns:HL7Message"/>
   <fault message="tns:HL7ErrorMessage" name="Error"/>
  </operation>
 </portType>
```

```
 <binding name="HL7WebServiceGatewaySoapHttp"
      type="tns:HL7WebServiceGateway">
  <soap:binding style="document"
        transport="http://schemas.xmlsoap.org/soap/http"/>
  <operation name="submitHL7">
   <soap:operation
soapAction="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:HL7WebServiceGate
way/submitHL7"/>
   <input>
    <soap:body use="literal" parts="HL7"/>
   </input>
   <output>
    <soap:body use="literal" parts="HL7Received"/>
   </output>
   <fault name="Error">
    <soap:fault use="literal" name="Error"/>
   </fault>
  </operation>
  <operation name="fetchHL7">
   <soap:operation
soapAction="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:HL7WebServiceGate
way/fetchHL7"/>
   <input>
    <soap:body use="literal" parts="HL7Fetch"/>
   </input>
   <output>
    <soap:body use="literal" parts="HL7"/>
   </output>
   <fault name="Error">
    <soap:fault use="literal" name="Error"/>
   </fault>
  </operation>
 </binding>
 <service name="HL7WebServiceGatewayV1_0">
  <port name="HL7WebServiceGatewaySoapHttpPort"
     binding="tns:HL7WebServiceGatewaySoapHttp">
   <soap:address location="tbd"/>
  </port>
 </service>
</definitions>
```

SOAP Sample Message

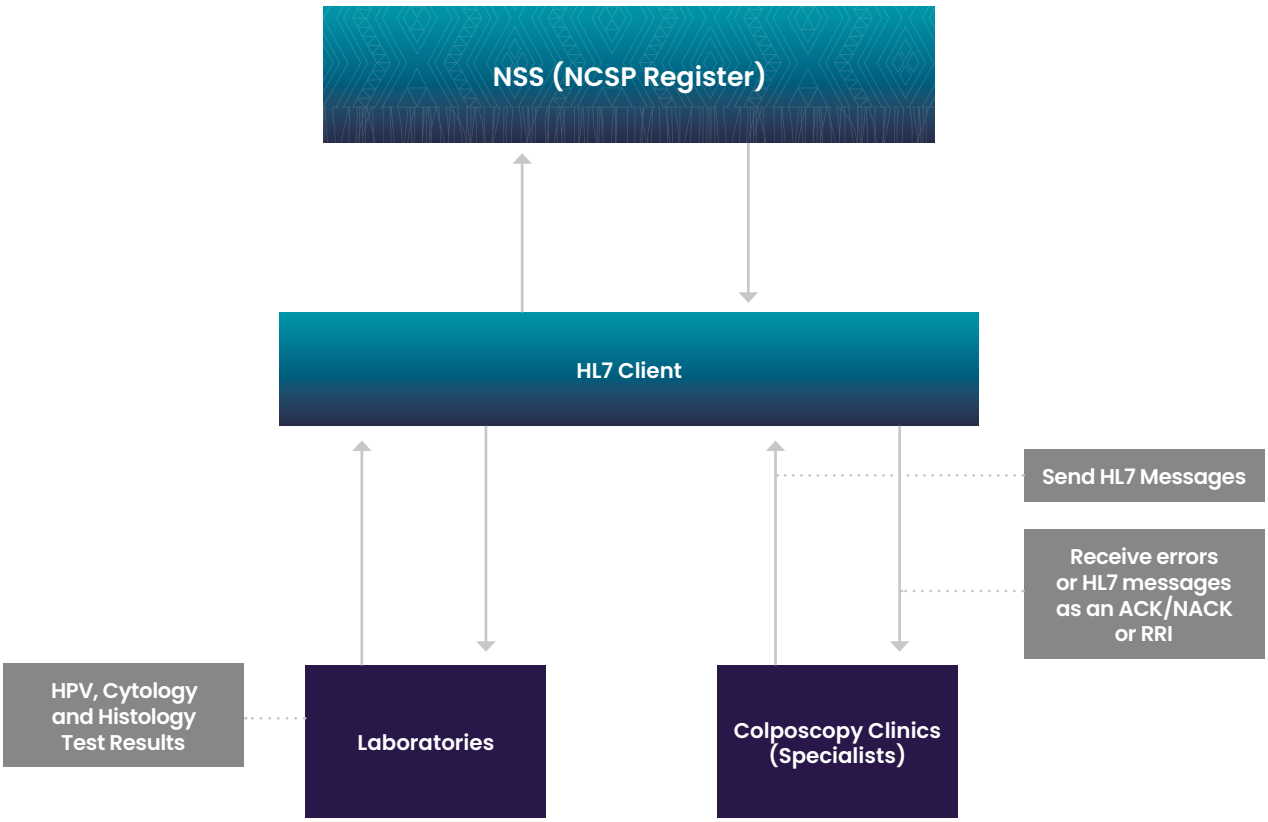
The following is a sample SOAP message illustrating the WS-Security headers required:

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ns0="urn:nz:govt:moh:nsu:register:hl7:web:service:gateway:1:0"
xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-
utility-1.0.xsd">
      <env:Header>
            <wsse:Security xmlns:wsse="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd" xmlns="http://
docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd"
xmlns:env="http://schemas.xmlsoap.org/soap/envelope/"
env:mustUnderstand="1">
                  <wsse:UsernameToken xmlns:wsse="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd"
xmlns="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-
1.0.xsd">
                        <wsse:Username> john.doe </wsse:Username>
                        <wsse:Password Type="http://docs.oasis-open.org/
wss/2004/01/oasis-200401-wss-username-token-profile-
1.0#PasswordText">furrycat</wsse:Password>
                        <wsu:Created
ValueType="http://www.w3.org/2001/XMLSchema/dateTime">2009-11-
10T20:40:11Z</wsu:Created>
                  </wsse:UsernameToken>
            </wsse:Security>
      </env:Header>
      <env:Body>
            <ns0:HL7>
                  <ns0:Message>
   <![CDATA[MSH|^~\&|Sample Lab System|Sample Lab|NCSP-R|…
      PID||X002715^^^L^^^^~BVD4316^^NHI^NZLMOH|DOE^JANE^(JANIE)|19720831|…
      ORC|ORD000012|LAB000012||||||200607121633|||013427^DOCTOR^…
      OBR|1|ORD000012|LAB000012~123|26438-2^Cytology Studies^LN|||…
      OBX|1|CE|19764-0^Statement of adequacy^LN||UA^The specimen is …
    MSH|^~\&|Sample Lab System|Sample Lab|NCSP-R|NSU|200607121633||ORU^R01…
      PID||X002894^^^L^^^^~LLX0159^^NHI^NZLMOH|SMITH^JANE …
      ORC|ORD000026|LAB000099||||||200607121333|||013427^DOCTOR^Ordering^M^^Dr^^^NZMC
      OBR|1|ORD000012|LAB000026~144|26438-2^Cytology Studies^LN|||…
      OBX|1|CE|19764-0^Statement of adequacy^LN||UA^The specimen is…]]>
</ns0:Message>
            </ns0:HL7>
      </env:Body>
</env:Envelope>
```

10.1.5 Screening message data flow

The below figure provides a simplified view of the electronic flow of data for the National Cervical Screening Programme. This implementation guide covers the flow of data between laboratories and the NCSP Register, and between colposcopy clinics and the NCSP Register.

Figure 2: Flow of Electronic information in the NCSP Register



10.2 Correcting reports

It is important that the NSS has correct information to support robust NCSP quality assurance processes.

Laboratories and colposcopy clinics may change an already sent HL7 v2 message by marking as **C** (corrected) in the relevant segment / row in the HL7 v2 message. Any result previously sent in error for the wrong participant must have a cancellation message sent out to the NCSP Register.

Laboratories should avoid sending any partial cancellation messages. Instead, a new message with the correct values should be sent through HL7 v2 to adhere to the HISO standards that recommend deleting a whole result and not specific values in a result due to the complexity of result messages. An amended or supplementary result will replace the existing result and a record of the previously submitted result must be retained as a version. A message containing a partial cancellation will be rejected.

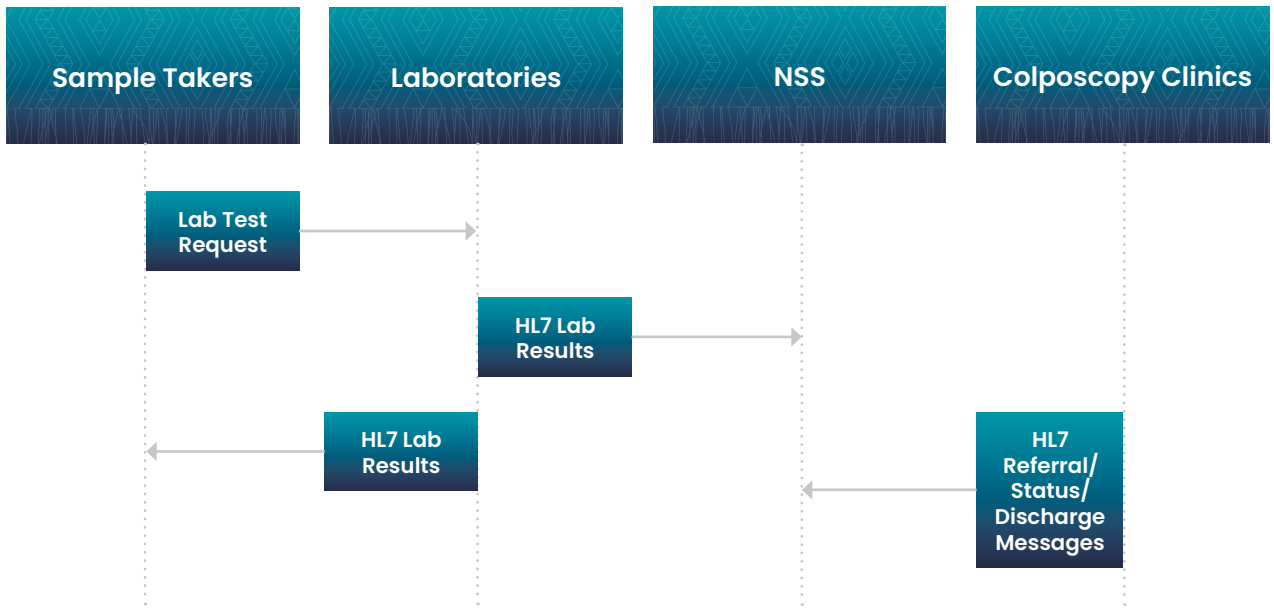
11. Transactions and message types

11.1 Exchanging information

HL7 v2.4 is an international standard that is used globally and within New Zealand to manage the workflow and content involved when health providers are exchanging clinical information about patients. The NSS has adopted HL7 v2.4. Message specifications have been developed based on information requirements to support the monitoring, operations, and quality of the National Cervical Screening Programme.

Figure 3 shows the standard electronic message and the steps involved with it. Each message has a corresponding acknowledgement message, but for simplicity the diagram does not include these.

Figure 3: Flow for standard notifications



12. Messaging conventions

Tables 29 and 30 below show the segments that are used and the responses. Items enclosed within square brackets [ ] are optional, and those within braces { } may be repeated multiple times.

12.1 General considerations

The NCSP Register does not support delimiters other than the default ones specified in this standard. It is essential that messages be constructed in segmented form rather than large blocks of formatted text.

Of all CE and XCN field types that are used by the NCSP Register, only the identifier and coding system/assigning authority sub-components are validated. The text sub-component within CE field types and the name sub-components within the XCN field types are ignored for validation purposes.

Each message must only have one participant (PID) per message (MSH). This does not preclude a stream of messages with different participants being sent at the same time or a stream of messages with the same participant being sent at the same time, where there are multiple samples taken concurrently.

It is implied in general by the HL7 standards that non-repeating fields can be repeated by local agreement. The NCSP Register will not only ignore additional repeats but will reject the message as being in error.

The NCSP Register supports ASCII and UNICODE and any value in MSH-18 will be ignored.

Previously National Screening Unit (NSU) and Health Centre Member (HCM) provider codes were accepted by the Register, but going forwards only HPI codes will be accepted. It is mandatory that fields representing a health facility or health worker contain a code that is recognised by the NCSP Register – that is, an HPI code.

12.2 ORU – Laboratory results message

The following results will be reported to the NCSP Register using the HISO 10008 Pathology and Radiology Messaging Standard.

- HPV Test Results
- Cytology Test Results
- Histology Test Results

The following outlines the expected segment types in an ORU message sent to the NCSP Register. Please note that these should be read together with the appropriate standard. While some items may be optional in HL7 or marked as 'not used' in the HISO 10008 Pathology and Radiology Messaging Standard, they may be mandatory in this implementation and further restrictions may be applied that are not in the referenced standards.

Further detail and specifications around use of ORU messages for NCSP can be found in the remainder of this document.

Table 29: ORU – Laboratory results message

SEGMENT NAME	DESCRIPTION
MSH	Message header
PID	Patient identification
{OBR}	Order detail – observation request
{OBX}	Observation/result
[NTE]	Notes and Comments

12.3 RSD – Referral, status and discharge messages

The following events will be reported to the NCSP Register using the HISO 10011.2 Referrals, Status and Discharges Messaging Standard.

- Acceptance/Rejection of a Referral
- Allocation/Cancellation of an appointment
- Visit outcomes
- Reporting "Did Not Attend" (DNA)
- Discharge Summaries.

The following outlines the expected segment types in an RSD message sent to the NCSP Register. Please note that these should be read together with the appropriate standard. While some items may be optional in HL7, they may be mandatory in this implementation and further restrictions may be applied that are not in the reference standard.

Further detail and specifications around use of RSD messages for NCSP can be found in the remainder of this document.

Table 30: RSD Message Segment

SEGMENT NAME	DESCRIPTION	DETAILS
MSH	Message Header	
RF1	Referral Information	
{PRD}	Provider Data	Generally repeated twice – once for the Referring Provider, and once for the Referred to Provider
PID	Patient Identification	
DG1	Diagnosis	Only required for 'Referral for Treatment or Transfer' RSD messages
{NTE}	Notes and Comments	
{ORC}	Order Common Segment	One or two
{OBR}	Observation Request	
{OBX}	Observation Result	
PV1	Patient Visit	If a message includes PV1 it is a 'Visit'. Mandatory for Status Report or Notification messages
PV2	Patient Visit Additional	

12.4 Response messages

In response to an ORU message, the NCSP Register will send an ACK message. This will include the Message Acknowledgement, and if rejected, an Error segment will also be included.

In response to an RSD message, the NCSP Register will send an RRI message. As with an ACK message – this will include a Message Acknowledgement, and if rejected then an Error segment will also be included.

Table 31: Response Message Segments

SEGMENT NAME	DESCRIPTION
MSH	Message header
MSA	Message acknowledgement
[ERR]	Error

12.5 Data types

For the details of the data types, refer to the HISO 10008 Pathology and Radiology Messaging Standard.

12.6 Composite data types

These composites are used in the definitions of the segments. Where additional clarification is required, these tables may be repeated in the segment notes. The composites provided below are limited to those that this implementation guide uses and where additional information is required that is not documented in the HISO 10008 Pathology and Radiology Messaging Standard.

12.6.1 CE – Coded element

For National Cervical Screening messages, this is used in OBX fields as well as being used within other fields such as OBR-4 – 'Universal service ID', OBR-46 – Placer supplemental service information, OBR-47 – Filler facility code, PID-10 – Ethnicity, and NTE-4 – Comment type.

The table below shows the CE data type components.

Table 32: CE – Coded element

COMPONENT	TYPE	NOTES
<identifier>	ST	Mandatory
<text>	ST	Optional
<name of coding system>	ID	Optional

12.6.2 CX – Extended composite ID with check digit components

The CX type is used for a participant's National Health Index (NHI) identifier in PID-3.

Table 33: CX – Extended composite ID with check digit components

	SUB COMPONENT	TYPE	NOTES
1	<ID>	ST	The value of the identifier itself.
2	<check digit>		*Not used.*
3	<code identifying the check digit scheme employed>	ID	'NHI' refers to the check digit algorithm in the National Health Index (NHI). See the relevant standards for other check digit schemes.
4	<assigning authority>	HD	Optional if the reported ID is an NHI or HPI identifier in which case it is assumed that the assigning authority is 'NZLMOH'. Mandatory if any other identifier is being reported.
5	<identifier type code>	ID	A code corresponding to the type of identifier. This will always be 'NHI' for the National Health Index identifier.

12.6.3 EI – Entity identifier

Refer to the HISO 10008 Pathology and Radiology Messaging Standard.

12.6.4 XAD – Extended address

Refer to the HISO 10008 Pathology and Radiology Messaging Standard.

12.6.5 XCN – Extended composite ID number

The XCN type is used in a number of places within cervical screening messages to contain a clinician's HPI CPN and, where required, an HPI Facility ID in each use case.

Refer to the HISO 10008 Pathology and Radiology Messaging Standard.

12.6.6 XPN – Extended person name component

Refer to the HISO 10008 Pathology and Radiology Messaging Standard.

12.7 Interpreting ‘optionality’ and ‘required for’

The table below sets out the way to interpret the column headings and values identified in Sections 13.8 – 13.13.

Table 34: Interpreting 'optionality' and 'required for'

	VALUE & DESCRIPTION	
Opt (Optionality)	R (Required)	This field must always contain data.
	O (Optional)	This field does not have to contain data.
	C (Conditional)	This field must contain data in certain situations as described in this document.

12.8 MSH – Message header segment

The MSH segment contains the information about the message including sender, recipient and some syntactical information.

This segment is common between both ORU and RSD messages. Where the specifications differ, these are elaborated on in the table below.

Table 35: MSH Attribute Table

DATA ELEMENT	FIELD	LEN	TYPE	OPT	COMMENTS
Field separator	MSH-1	1	ST	R	The field separator character will be '|'.
Encoding Characters	MSH-2	4	ST	R	To ensure messaging consistency, the following encoding characters must be used: ^ - component separator ~ - repetition separator \ - escape character & - sub-component separator.
Sending application	MSH-3	180	HD	R	The sending application that generated the message.
Sending facility	MSH-4	180	HD	R	This field contains the sending facility. It is required that this contains an HPI Facility ID.
Receiving application	MSH-5	180	HD	R	• For Labs: the value must be 'NCSR' • For Colposcopy Clinics: the value must be 'NCSP'
Receiving facility	MSH-6	180	HD	R	• For Labs: the value must be 'NSU' • For Colposcopy Clinics: the value must be 'NCSP'
Date/time of message	MSH-7	26	TS	R	Format: YYYY[MM[DD[HHMM[SS[.S[S[S[S]]]]]]]][+/-ZZZZ]

Message type	MSH-9	15	CM	R	Minimum requirement is the text 'ORU', 'REF' or 'ACK'. The field can optionally extend to the trigger event and message structure components in the following format: • ORU^R01^ORU_R01 • REF^I12^REF_I12 • REF^I14^REF_I12 • ACK^R01^ACK_R01 • RRI^I12^RRI_I12 • RRI^I14^RRI_I12.
Message control ID	MSH-10	20	ST	R	Number or other identifier generated by the sending application that uniquely identifies a message.
Processing ID	MSH-11	3	PT	R	The following values must be used: P – normal processing D – debugging T – training. P is the default.
Version ID	MSH-12	60	VID	R	Format: '2.4' HL7 version 2.4 format can optionally extend to the 'Internationalisation Code' and 'International Version ID' components allowed by HL7.
Character Set	MSH-18	16	ID	O	Character set for the entire message • ASCII • UNICODE

12.8.1 MSH-3 – Sending application

The sending application that generated the message.

This is a variance to the HISO 10008.2:2015 Pathology and Radiology Messaging Standard as it is a required field.

Example:

```
MSH|^~\&|PATHLAB|Z9Z987-Z
|NCSR|NSU|20220810080533||ORU^R01|303527790122207|P|2.4^NZL^1.0
```

12.8.2 MSH-4 – Sending facility

This field contains the sending facility. This must contain an HPI Facility ID.

Example:

```
MSH|^~\&|PATHLAB|Z9Z987-Z
|NCSR|NSU|20220810080533||ORU^R01|303527790122207|P|2.4^NZL^1.0
```

12.8.3 MSH-5 – Receiving application

This field identifies the receiving application.

This is a variance to the HISO 10008.2:2015 Pathology and Radiology Messaging Standard as it is a required field.

ORU Messages

For laboratories, the value must be 'NCSR'.

Example:

```
MSH|^~\&|PATHLAB|pathlabs|NCSR|NSU|20220810080533||ORU^R01|303527790122207|P|
2.4^NZL^1.0
```

RSD Messages

For colposcopy clinics, the value must be 'NCSP'

Example:

```
MSH|^~\&|Gynaecology Plus x.xx|NCSP Register
Team|NCSP|NCSP|20130920154853||REF^I12|TECH_REF_0004_2|P|2.4^NZL^1.0||||||ASCII|||
```

12.8.4 MSH-6 – Receiving facility

This field identifies the receiving facility.

ORU Messages

For laboratories, the value must be 'NSU'

Example:

```
MSH|^~\&|PATHLAB|pathlabs|NCSR|NSU|20220810080533||ORU^R01|303527790122207|P|
2.4^NZL^1.0
```

RSD Messages

For colposcopy clinics, the value must be 'NCSP'

Example:

```
MSH|^~\&|Gynaecology Plus x.xx|NCSP Register
Team|NCSP|NCSP|20130920154853||REF^I12|TECH_REF_0004_2|P|2.4^NZL^1.0||||||ASCII|||
```

12.8.5 MSH-9 – Message type

This field identifies the message type.

Minimum requirement is the text 'ORU', 'REF', or 'ACK'.
The field can optionally extend to the trigger event and message structure components in the following format:

- ORU^R01^ORU_R01
- REF^I12^REF_I12
- REF^I14^REF_I12
- ACK^R01^ACK_R01
- RRI^I12^RRI_I12
- RRI^I14^RRI_I12

Table 36: MSH-9 Message Type Components

SUB COMPONENT	TYPE	NOTES
<Message Type>	ID	
<Trigger Event Code>	ID	
<Message Structure ID>	ID	

Example (ORU message):

```
MSH|^~\&|PATHLAB|pathlabs|NCSR|NSU|20220810080533||ORU^R01|303527790122207|P|
2.4^NZL^1.0
```

Example (RSD message):

```
MSH|^~\&|Gynaecology Plus x.xx|NCSP Register
Team|NCSP|NCSP|20130920154853||REF^I12|TECH_REF_0004_2|P|2.4^NZL^1.0||||||ASC
II|||
```

12.8.6 MSH-11 – Processing ID

Indicates how a receiving system should process this message.
The following values must be used:

Table 37: MSH-11 Processing ID

VALUE	DESCRIPTION
P	Process this message as normal.
D	This message is being used for debugging purposes. It should be properly acknowledged but all data contained within this message should be ignored.
T	This message is being used for training purposes. It should be properly acknowledged, and data may be used to populate a training database (optional).

P is the default value.

Example:

```
MSH|^~\&|PATHLAB|pathlabs|NCSR|NSU|20220810080533||ORU^R01|303527790122207|P
|2.4^NZL^1.0
```

12.8.7 MSH-18 – Character set

Character set for the entire message. While other character sets are accepted for HL7 version 2.4 messages, only ASCII and UNICODE cervical screening messages will be accepted, and any other value in MSH-18 will be ignored.

Table 38: HL7 Table 0211 – Alternative Character Sets

VALUE	DESCRIPTION
ASCII	The printable 7-bit ASCII character set (the default if this field is omitted)
UNICODE	The worldwide character standard from ISO/IEC 10646-1-19933

Example:

```
MSH|^~\&|Gynaecology Plus x.xx|NCSP Register
Team|NCSP|NCSP|20130920154853||REF^I12|TECH_REF_0004_2|P|2.4^NZL^1.0||||||ASC
II|||
```

12.9 PID – Patient Identification

This segment is common between both ORU and RSD messages. Where the specifications differ, these are elaborated on in the table below.

Table 39: PID Attribute Table

DATA ELEMENT	FIELD	LEN	TYPE	OPT	COMMENTS
Set ID	PID-1	4	SI	O	
Patient Identifier List	PID-3	250	CX	R	
Patient Name	PID-5	250	XPN	R	
Date of Birth	PID-7	26	TS	R	The time sub-components of this field are optional.
Administrative Sex	PID-8	1	IS	O	
Ethnicity	PID-10	250	CE	O	
Patient Address	PID-11	250	XAD	R	

12.9.1 PID-1 – Set ID

This field uniquely identifies each repeat of the PID segment. The value is 1 for the first PID segment in the message and increases incrementally for each subsequent PID segment.

Note that each cervical screening message must only have one participant (PID) per message (MSH), so it is not expected that there will be any repeats of the PID segment for any cervical screening messages.

This field is not used in RSD message types.

12.9.2 PID-8 – Administrative Sex

This field contains the participant's sex. The NSS does not require this information from laboratories; providing it is optional.

Note: A review of the categories for capturing sex related details is currently underway by Health New Zealand | Te Whatu Ora.

Table 40: PID-8 Sex

VALUE	DESCRIPTION
F	Female
M	Male
O	Other
U	Unknown

Example:

```
PID|||ZZZ1234^^NHI^NZLMOH^NHI||Smith^Jane^Grace^^Ms^^L||19710212|F||11^New
Zealand European^99NZETH~12^Other European^99NZETH|10 EXAMPLE
STREET^SUBURB^CITY^REGION^2100^NEW ZEALAND
```

12.9.3 PID-10 – Ethnicity

This field is used to record the ethnicity of the participant. The Register will accept ethnicity details recorded at level 2 ethnicity. A participant's ethnicity is optional to report. If a participant's ethnicity is reported, the ethnicity code component 99NZETH is required and all other components are optional.

Up to three ethnicities may be reported, each ethnicity separated by a field repetition separator.

Note: The move to collecting ethnicity at Level 4 and up to six instances to align with the HISO 10001:2017 Ethnicity Data Protocols will be included in a future enhancement.

Refer to the **Ethnicity table** referenced on Health NZ's website for acceptable ethnicity codes.

Example:

```
PID|||ZZZ1234^^NHI^NZLMOH^NHI||Smith^Jane^Grace^^Ms^^L||19710212|F||11^New
Zealand European^99NZETH~12^Other European^99NZETH|88 Great
Street^Workplace^Auckland^Northland^2015^New Zealand|
```

12.9.4 PID-11 – Patient address

This field contains the address information of the participant. It is a mandatory requirement for laboratories to send a participants' address to the NSS using the XAD data type.

The HISO 10008 Pathology and Radiology Messaging Standard states that the mailing address should always be sent first. If the first address is not the mailing address, then a repeat delimiter should be sent to indicate an empty mailing address.

Example:

```
PID|||ZZZ1234^^NHI^NZLMOH^NHI||Smith^Jane^Grace^^Ms^^L||19710212|F||11^New
Zealand European^99NZETH~12^Other European^99NZETH|88 Great
Street^Workplace^Auckland^Northland^2015^New Zealand|
```

12.10 OBR – Observation Request

This segment is common between both ORU and RSD messages. Where the specifications differ, these are elaborated on in the table below.

This segment is used to transmit information specific to an order for a diagnostic study, observation, physical examination, or assessment. In many cases this information would be the same as that sent in the ORC segment. However, this OBR segment identifies the diagnostic specifics of the service required.

Table 41: OBR Attribute Table

DATA ELEMENT	FIELD	LEN	TYPE	OPT	COMMENTS
Set ID	OBR-1	4	SI	O	
Placer Order Number	OBR-2	50	EI	O (ORU) R (RSD)	
Filler Order Number	OBR-3	50	EI	R	
Universal Service ID	OBR-4	250	CE	R	
Observation Date/Time	OBR-7	26	TS	R	
Collector ID	OBR-10	250	XCN	O	
Specimen Received Date/Time	OBR-14	26	TS	R (ORU) O (RSD)	Date Received at Lab or Clinic
Ordering Provider	OBR-16	250	XCN	R	
Results Rpt/Status Chg – Date/Time	OBR-22	26	TS	R (ORU) O (RSD)	
Diagnostic Service Section ID	OBR-24	10	ID	R (ORU) O (RSD)	Further detail about identifiers used for each message outlined further in this document
Result Status	OBR-25	1	ID	R	
Placer Supplemental Service Information	OBR-46	250	CE	R (ORU) X (RSD)	
Filler Supplemental Service Information	OBR-47	250	CE	R (ORU) X (RSD)	

12.10.1 OBR-2 – Placer order number

This field uniquely identifies an individual order from the application responsible for placing the order.

12.10.2 OBR-3 – Filler order number

This field uniquely identifies an individual order from the application responsible for filling the order.

The Filler Order Number will be stored within the NSS to enable communication with a laboratory about a particular report.

12.10.3 OBR-10 – Collector ID

This field will identify the health provider responsible for collecting or analysing the specimen.

This field will include a unique identifier, the HPI CPN for the health worker responsible for collecting or analysing the sample that this report related to. See **HPI Common Person Number** for the format of the HPI CPN.

Example:

```
OBR|0001|X112|X112A|11481-9^HPV Test
Result^LN|||202208021059|||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||202208021158|
|10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||||202208101205||OTH|F|||||||||||||||||
|||F03026^^HF|FXX888^^HF
```

12.10.4 OBR-14 – Specimen received date/time

ORU Messages

Use the date when the tissue was received in the laboratory for ORU messages.

REF Messages

If available, use the date and time when the referral was received by the colposcopy clinic for REF messages. Otherwise use the date and time the referral was accepted for REF messages.

Example:

```
OBR|0001|X112|X112A|11481-9^HPV Test
Result^LN|||202208021059|||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||202208021158||
10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||||202208101205||OTH|F|||||||||||||||||||
F03026^^HF|FXX888^^HF
```

The specimen received date must be less than or equal to the current date and time. See 3.5.3 Date and time value domain for the format of this field.

12.10.5 OBR-16 – Ordering provider

This field is the HPI CPN for the health provider (sample taker or colposcopist) responsible for collecting or analysing the sample that this report related to. This should appear on the request form sent to the laboratory. See 5.2.1 HPI Common Person Number for the format of the HPI-CPN.

Previously NSU and HCM provider codes were accepted by the NCSP Register, but going forwards only HPI codes will be accepted. It is mandatory that OBR-16 (ordering provider) contain a code that is recognised by the Register – that is, an HPI-CPN code.

In RSD messages this field will be exactly the same as ORC-12.

Example:

```
OBR|0001|X112|X112A|11481-9^HPV Test
Result^LN|||202208021059|||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||202208021158|
|10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||||202208101205||OTH|F|||||||||||||||||
|||F03026^^HF|FXX888^^HF
```

12.10.6 OBR-24 – Diagnostic service section ID

This field contains information on the section of the diagnostic service where the observation was performed. If the study was performed by an outside service, the identification of that service should be recorded here. Refer to Table 152 for the relevant Diagnostic Service Section ID in HISO 10008 Pathology and Radiology Messaging Standard.

12.10.7 OBR-25 – Result status

This field gives the status of the order result. The values to be used for reporting into the NSS are as follows:

Table 42: HL7 Table 0123 – Result Status

VALUE	HL7 DEFINITION	USAGE
C	Correction to results.	If any change (such as a change to demographic details or the inclusion of additional information in a supplementary report) or amendment is made to a result, then C must be used. Note that Result Status could be 'C' the first time that a message is received by the NSS.
F	Final results; results stored and verified. This shall only be changed with a corrected result.	If this is the first time a result has been sent and there have been no modifications, then F will be used.
X	Order cancelled.	If the result is to be cancelled then X will be used.

Example:

```
OBR|0001|X112|X112A|11481-9^HPV Test
Result^LN|||202208021059|||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||202208021158|
|10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||||202208101205||OTH|F|||||||||||||||||
|||F03026^^HF|FXX888^^HF
```

12.10.8 OBR-46 – Placer supplemental service information

For the purposes of the cervical screening messages sent to the NSS, this field contains supplemental service information for the original recipient– that is, the placer facility code (HPI Facility ID)
of the ordering clinician placing the order. The name of the coding system is **HF** for **HPI**.

12.10.9 OBR-47 – Filler supplemental service information

For the purposes of the cervical screening messages sent to the NSS, this field contains supplemental service information – that is, the filler facility code (HPI Facility ID) of the laboratory processing the order. The name of the coding system is **HF** for **HPI**.

12.11 OBX – Observation result

This segment is common between both ORU and RSD messages. Where the specifications differ, these are elaborated on in the table below.

Table 43: OBX Attribute Table

DATA ELEMENT	FIELD	LEN	TYPE	OPT	COMMENTS
Set ID	OBX-1	4	SI	O	
Value Type	OBX-2	2	ID (ORU) ED (RSD)	C	
Observation Identifier	OBX-3	250	CE	R	
Observation Value	OBX-5	N/A (ORU) 5,242,880 (5MB) (RSD)	*	O	
Observation Result Status	OBX-11	1	ID	R	F,C
Observation Method	OBX-17	250	CE	O	
Date/Time of the Analysis	OBX-19	26	TS	X (ORU) O (RSD)	Not used for ORU, only relevant for RSD

12.11.1 OBX-2 – Value type

This field contains the format of the observation value in OBX-5. This field must contain a value unless OBX-11 contains an "X" to indicate that this segment does not report any results. The valid values for this field are listed in the table below:

Table 44: HL7 Table 0125 – Value Type

VALUE	DESCRIPTION
CE	Coded Entry
DT	Date

Example:

```
OBX|0003|CE|19772-3^Preparation technique^LN||LBC^Liquid based
cytology^99NZCYTOCOLF||||||SRPTH^SurePath^99NZCLBCP
```

12.11.2 OBX-5 – Observation value

This field contains the value observed (the actual result). This field is formatted according to the data type stated in OBX-2, above.

ORU Messages

Variance to HL7: *The length of OBX-5 is unlimited, but consideration must be given to restrictions imposed by the message transport system.*

Example:

```
OBX|0003|CE|19772-3^Preparation technique^LN||LBC^Liquid based cytology^BTH-
2014||||||F||||||SRPTH^SurePath^99NZCLBCP
```

RSD Messages

Variance to HL7: The size of the OBX-5 field has been increased to 5MB to better suit New Zealand requirements, whereas it was limited to 64k in HL7.

Example:

```
OOBX|3|CE|21978-2^Source of Information^LN||GLA^Glandular Abnormality
(AIS/AGC)^99NZCOLPREASON||||||F||||||||
```

If information is submitted in OBX-19 – Date/time of the analysis the OBX-5 field contains the Code type repeated (for example, the first and third values of the OBX-5 must both contain the code).

Example:

```
OBX|21|CE|21976-6^Cancer Outcome Status^LN||99NZCOLPAPPOINTMENT^Appointment
Date^99NZCOLPAPPOINTMENT||||||F||||||||20131111
```

12.11.3 OBX-11 – Observation result status

This field reflects the current completion status of the results for one observation identifier. Refer to the table below for the values to be used when submitting information to the NSS:

Table 45: HL7 Table 0085 – Observation Results Status

VALUE	DESCRIPTION
F	Final results
C	Record coming over is a correction and thus replaces a final result

Example:

```
OBX|0003|CE|19772-3^Preparation technique^LN||LBC^Liquid based cytology^BTH-
2014||||||F||||||SRPTH^SurePath^99NZCLBCP
```

12.11.4 OBX-17 – Observation method

This field is used to transmit the method or procedure by which an observation was obtained when the sending system wishes to distinguish among one measurement obtained by different methods, and the distinction is not implicit in the test ID.

Example:

```
OBX|0003|CE|19772-3^Preparation technique^LN||LBC^Liquid based cytology^BTH-
2014||||||F||||||SRPTH^SurePath^99NZCLBCP
```

12.11.5 OBX-19 – Date/time of the analysis

When dates are required to be submitted in OBX segments the date value is placed in the OBX-19 field (format YYYYMMDD[HHMM[SS]]).

Note: This is a variance to the HISO 10008 Pathology and Radiology Messaging Standard as OBX-19 is required to be used when submitting cervical screening information.

12.12 NTE – Notes and comments

An NTE segment always provides information regarding the segment that it immediately follows. The NTE should contain notes or comments that extend the information provided in the segment it follows.

The comment may contain multiple lines of text, using the line-break escape character to demark end-of-line. The preference should be to use a single NTE to contain the entire text where possible (see 'Set Id', below).

Table 47: NTE Attribute Table

DATA ELEMENT	FIELD	LEN	TYPE	OPT	COMMENTS
Set ID	NTE-1	4	SI	R	
Source of comment	NTE-2	8	ID	O	
Comment	NTE-3	64k	FT	O	
Comment Type	NTE-4	250	CE	O	

12.12.1 NTE-4 – Comment type

This field contains a value to identify the type of comment text being sent in the specific comment record.

Table 47: Comment Type

VALUE	DESCRIPTION
OC	Optional clarification

Note: This is a variance to the HISO 10008.2:2015 Pathology and Radiology Messaging Standard and HISO 10011.2 Referrals, Status and Discharges Messaging Standard as "OC" is a user defined code specific to the NCSP Register.

Example:

```
NTE|1|P|Abnormal screening smear - Atypical glandular [AGC] / [AGUS]|OC|
```

12.13 RSD – Message segment details

This section includes details about segments that are only used for RSD Messages. They are ordered below in the order that they appear in an RSD message.

12.13.1 RF1 – Referral information

This segment represents information that is used when sending referrals, from the referring health provider to the referred to health provider.

Table 48: RF1 Attribute Table

DATA ELEMENT	FIELD	LEN	TYPE	OPT	COMMENTS
Referral Status	RF1-1	250	CE	O	
Referral Priority	RF1-2	250	CE	O	
Referral Type	RF1-3	250	CE	R	
Originating Referral Identifier	RF1-6	30	EI	R	
Effective Date	RF1-7	26	TS	O	

12.13.2 RF1-1 – Referral status

This field contains the status of the referral as defined by either the referred-to or the referred-by provider. For RRI and REF messages this will be 'A'.

Table 49: HL7 User Defined Table 0283 – Referral Status

VALUE	DESCRIPTION
A	Accepted
C	Cancelled

Example:

```
RF1|A^Accepted^HL70283|R|MED^Medical^HL70281|||TECH_REF_0004|20130826120000||||
```

12.13.3 RF1-2 – Referral priority

This field contains the priority of the referral.

Table 50: 99NZPriority – Referral Priority

VALUE	DESCRIPTION
R	Routine

Example:

```
RF1|A^Accepted^HL70283|R|MED^Medical^HL70281|||TECH_REF_0004|20130826120000||||
```

12.13.4 RF1-3 – Referral type

This field contains the type of referral. Only referral types that are relevant for the NCSP are included in the table below.

Note: This is a variance to the HISO 10011-2 Referrals Status and Discharges Messaging Standard as this is required when submitting information to the NSS.

Table 51: HL7 User Defined Table 0281 – Referral Type

VALUE	DESCRIPTION
MED	Medical
DRF	Discharge Referral
NOT	Notification
DIS	Discharge Summary
DNA	Did Not Attend
SRP	Status Report

Example:

```
RF1|A^Accepted^HL70283|R|MED^Medical^HL70281|||TECH_REF_0004|20130826120000||||
```

12.13.5 PRD – Provider data

The provider segment identifies the providers associated with the transfer of this referral.

Table 52: PRD Attribute Table

DATA ELEMENT	FIELD	LEN	TYPE	OPT	COMMENTS
Provider Role	PRD-1	250	CE	R	
Provider Name	PRD-2	250	XPN	O	
Provider Address	PRD-3	250	XAD	O	
Provider Identifiers	PRD-7	100	CM	O	HPI identifier

12.13.6 PRD-1 – Provider role

This field contains the role of the provider.

Table 53: User Defined Table 99NZPRRL – Provider Role

VALUE	DESCRIPTION
RP	Discharging/Referring Provider
RT	Discharged to/Referred to Provider

Example:

```
PRD|RP^Referring Provider^99NZPRRL|Test^Provider|No
gprAddress||||Z1Z111^HF~10FAAM^HI||
PRD|RT^Referred to Provider^99NZPRRL|Test^Refereet|Test Street Palmerston
North||||Z2Z222^HF~10ZAZA^HI||
```

12.13.7 PRD-2 – Provider name

This field contains the name of the provider identified in this segment using the XPN data type.

Example:

```
PRD|RP^Referring Provider^99NZPRRL|Test^Provider|No
gprAddress||||Z1Z111^HF~10FAAM^HI||
```

12.13.8 PRD-7 – Provider identifiers

This field contains the provider's unique identifiers.

Previously NSU and HCM provider codes were accepted by the Register, but going forwards, the NSS will only accept HPI codes. It is mandatory that PRD-7 contain a code that is recognised by the NCSP Register – that is, an HPI code.

Table 54: HPI 10006 2.1.1 Identifier Type

VALUE	DESCRIPTION
HF	Health Provider Index – Facility Identifier
HI	Health Provider Index CPN

Example:

```
PRD|RP^Referring Provider^99NZPRRL|Test^Provider|No
gprAddress||||Z1Z111^HF~10FAAM^HI||
```

12.13.9 DG1 – Diagnosis

The DG1 segment contains participant diagnosis information of various types, e.g. admitting, primary, etc. The DG1 segment is used to send multiple diagnoses (e.g. for medical records encoding).

This diagnosis coding should be distinguished from the clinical problem segment used by health providers to manage the participant. Coding methodologies are also defined.

Table 55: DG1 Attribute Table

DATA ELEMENT	FIELD	LEN	TYPE	OPT	COMMENTS
Set ID	DG1-1	4	SI	R	
Diagnosis Code	DG1-3	250	CE	R	
Diagnosis Date/Time	DG1-5	26	TS	O	
Diagnosis Type	DG1-6	2	IS	R	

12.13.10 DG1-3 – Diagnosis code

This field replaces DG1-2 and DG1-4 for reporting coding method and diagnosis description.

Variance to HL7: This field is required in this implementation, whereas HL7 does not require this field.

Table 56: HL7 User Defined Table 0396 – Coding Systems

VALUE	DESCRIPTION
99zzz	Local general code, where z is an alphanumeric character

Example:

```
DG1|1||HPVOL2^HPV other persistent low grade change - Second HPV detected other and
cytology result of Negative or ASCUS/LSIL
>50^99NZCOLPPRIORITY||20130905120000|F||||||||||||
```

12.13.11 DG1-6 – Diagnosis type

This field contains the code that identifies the type of diagnosis being sent.

Table 57: HL7 User Defined Table 0052 – Diagnosis Type

VALUE	DESCRIPTION
F	Final Diagnosis

Example:

```
DG1|1||HPVOL2^HPV other persistent low grade change - Second HPV detected other and
cytology result of Negative or ASCUS/LSIL
>50^99NZCOLPPRIORITY||20130905120000|F||||||||||||
```

12.13.12 ORC – Common Order Segment

The ORC segment is used to transmit fields that are common to all orders (all types of services that are requested).

Table 58: ORC Attribute Table

DATA ELEMENT	FIELD	LEN	TYPE	OPT	COMMENTS
Order Control	ORC-1	2	ID	R	
Placer Order Number	ORC-2	50	EI	R	
Ordering Provider	ORC-12	250	XCN	R	

12.13.13 ORC-1 – Order control

Table 59: HL7 Table 0119 – Order Control Codes

VALUE	SENDER	DESCRIPTION
IN	Placer or Filler	Information

Example:

```
ORC|IN|TECH_REF_0004 ||||||||||10FAAM^Test^Referee^Dr^^^^^NZLMOH^^^^HI||||||||||||
```

12.13.14 ORC-12 – Ordering provider

This field contains the identity of the person who is responsible for creating the request. It is used in cases where the request is entered by a technician and needs to be verified by a higher authority. This is usually the clinician who is assigned to the participant after triage/accepting the referral.

Example:

```
ORC|IN|TECH_REF_0004 ||||||||||10FAAM^Test^Referee^Dr^^^^^NZLMOH^^^^HI||||||||||||
```

12.13.15 PV1 – Patient Visit

This segment is used to communicate information on a visit or account specific basis.

Table 60: PV1 Attribute Table

ELEMENT NAME	FIELD	LEN	TYPE	OPT	COMMENTS
Set ID	PV1-1	4	SI	O	
Patient Class	PV1-2	1	IS	R	
Admit Date/Time	PV1-44	26	TS	O	

12.13.16 PV1-2 – Patient class

This field is used by systems to categorise participants.

Table 61: HL7 User Defined Table 0004 – Patient Class

VALUE	DESCRIPTION
D	Day patient
I	Inpatient
O	Outpatient

This is a variance to the HISO 10011.2 Referrals, Status and Discharges Messaging Standard as the Standard does not include the value 'D'.

12.13.17 PV1-44 – Admit date/time

This field contains the admit date/time of a participant.

If reporting an event that has occurred, then the visit date that is being reported is carried in the PV1-44 segment. If the event has not happened, such as a future appointment or DNA, then the date is carried in PV2-8 segment instead.

12.13.18 PV2 – Patient visit additional information

The PV2 segment is a continuation of information contained on the PV1 segment. The PV2 segment will only be received as part of a Did Not Attend (DNA) message and will report the rescheduled appointment date.

Table 62: PV2 Attribute Table

ELEMENT NAME	FIELD	LEN	TYPE	OPT	COMMENTS
Accommodation Code	PV2-2	250	CE	O	
Expected Admit Date/Time	PV2-8	26	TS	O	

12.13.19 PV2-8 – Expected Admit Date/Time

This field contains the date and time that the participant is expected to be admitted. This field is also used to reflect the date/time of an outpatient/emergency patient registration.

If reporting an event that has not happened such as a future appointment and then the date is carried in PV2-8 segment. Note: If the event has occurred, then the visit date that is being reported is carried in the PV1-44 segment instead.

12.13.20 Response Message Segment details

Response messages will be sent back from the NCSP Register in response to an ORU or RSD message from a laboratory or colposcopy clinic. These contain acknowledgement of receipt of the message, and optionally include an ERR segment detailing the reason why the message was rejected/unable to be processed by the NCSP Register.

An 'ACK' message is sent in response to an ORU message (from a laboratory), and an RRI is sent in response to an RSD message. The type of message is specified in MSH-9:

- ACK^R01^ACK_R01
- RRI^I12^RRI_I12
- RRI^I14^RRI_I12

The sections below outline the expected structure/content for MSA (Message Acknowledgement) and ERR (Error Detail) segments that are included in response messages.

12.13.21 MSA – Message Acknowledgement

This segment contains information sent in acknowledging another message.

Table 63: MSA Attribute Table – Message Acknowledgement

ELEMENT NAME	FIELD	LEN	TYPE	OPT	COMMENTS
Acknowledgement Code	MSA-1	2	ID	R	Accepted values: • AA (Application Accept) • AE (Application Error) • AR (Application Reject)
Message Control ID	MSA-2	20	ST	R	
Text Message	MSA-3	80	ST	O	
Error Condition	MSA-6	250	CE	O	Table 64: HL70357 Error Condition Codes

12.13.22 MSA-6 – Error Condition

This field, if being used instead of ERR-1 to describe an error condition, has an increased field length of 250 characters. This provides the ability to further describe an error condition in more detail.

Table 64: HL70357 Error Condition Codes

ERROR CONDITION CODE	ERROR CONDITION TEXT	DESCRIPTION/COMMENT
Success		
0	Message accepted	Success. Optional, as the acknowledgement code conveys success. Used for systems that must always return a status code.
Errors		
100	Segment sequence error	The message segments were not in the proper order, or required segments are missing.
101	Required field missing	A required field is missing from a segment.
102	Data type error	The field contained data of the wrong data type.
103	Table value not found	A field of data type ID or IS was compared against the corresponding table, and no match was found.
Rejection		
201	Unsupported event code	The event code is not supported.
204	Unknown key identifier	The ID of the patient, order, etc. was not found. Used for transactions other than additions, e.g. transfer of a non-existent patient.
205	Duplicate key identifier	The ID of the patient, order, etc., already exists. Used in response to additional transactions (Admit, New Order, etc.).
207	Application internal error	A catchall for internal errors not explicitly covered by other codes.

Example:

```
MSA|AR|221932|The incoming message has been rejected due to an
error.|||200^Unsupported message type|
```

12.13.23 ERR – Error Detail

Error Reporting

Errors will be reported back to the sending organisation in an ERR segment with additional text indicating the nature of the error.

Table 65: ERR Attribute table

DATA ELEMENT	FIELD	LEN	TYPE	OPT	COMMENTS
Error Code and Location	ERR-1	80	CM	R	

12.13.24 ERR-1 – Error Code and Location

This field identifies an erroneous segment in another message. It should be completed as much as possible. It is composed of the components listed in table below.

Table 66: ERR 1 – Error Code and Location Component

SUB COMPONENT	TYPE	NOTES
<segment ID>	ST	Name of segment where the problem was identified, e.g. OBR
<sequence>	NM	Index of segment where there are more than one of type <segment ID>
<field position>	NM	Index of the field that caused the problem
<code identifying error>	CE	Table 64: HL70357 Error Condition Codes

Example:

ERR|**OBX^10^5^103&&HL70357**

The error text is pre-pended with a three-letter code relating to the HL70357 Error Condition Code as follows, codes not listed are not used by the NCSP Register:

Table 67: HL70357 Error Condition Code Abbreviations

Error Condition Code	Description	Abbreviation
100	Segment sequence error	SSE
101	Required field missing	RFM
102	Data type error	DTE
103	Table value not found	TVN
201	Unsupported event code	UEC
204	Unknown key identifier	UKI
205	Duplicate key identifier	DKI
207	Application internal error	AIE

Example:

```
ERR|OBX^10^5^103&TVN. '' not valid for 'Visit Purpose'&HL70357
```

Appendix A: Example messages

Cytology result message

Example:

```
MSH|^~\&|AcmeGPsystem|Z1Z234-
Z|NCSR|NSU|20221017141113||ORU^R01^ORU_R01|5957786185|P|2.4^NZL^1.0<cr>

PID|||ZZZ1234^^NHI^NZLMOH^NHI||Smith^^^^Ms^^L||19710212|F||11111^New Zealand
European^99NZETH|10 EXAMPLE STREET^SUBURB^^^2100^NEW ZEALAND <cr>

OBR|0001|ORD000016|07877|RNZ0504^Gynaecological
Cytology^NZPOCS|||20220701|||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||20220705||013427
^DOCTOR^Ordering^M^^Dr^^^NZLMOH^^^^HI||||||20220810||CP|F||||||||||||||||||||FZZ
999^^HF|FXX888^^HF

OBX|0001|CE|19763-2^Specimen Site ^LN||R^Cervical^BTH-2014||||||F||||||

OBX|0002|CE|19772-3^Preparation Techniques^LN||LBC^Liquid based cytology^BTH-
2014||||||F||||||SRPTH^SurePath^99NZCLBCP

OBX|0003|CE|19764-0^Statement of adequacy^LN||S1^The specimen is satisfactory for
evaluation^BTH-2014||||||F||||||

OBX|0004|CE|19762-4^General Category^LN||G1^Negative for intraepithelial lesion or
malignancy^BTH-2014||||||F||||||

OBX|0005|CE|19765-7^Interpretation^LN|1|O3^There is a shift in microbiological flora
suggestive of bacterial vaginosis^BTH-2014||||||F||||||

OBX|0006|CE|19773-1^Recommendation^LN||H1^The next HPV screening test should be
taken in 5 years, based on the NCSP Register history^BTH-2014||||||F||||||
```

HPV result message – HPV Type 16 detected

Example:

```
MSH|^~\&|PATHLAB|Z9Z987-Z|NCSR|NSU|20220810080533||ORU^R01|303527790122207|P|2.4
^NZL^1.0

PID|||ZZZ0001^^^NZLMOH||^John^George^^Prof^^L||19950101|F||11|88 Great
Street^Workplace^Auckland^Northland^2015^New Zealand|

OBR|0001|X112|X112A|11481-9^HPV Test
Result^LN|||202208021059|||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||202208021158
||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||||202208101205||OTH|F|||||||||||||||||||
F03026^^HF|FXX888^^HF

OBX|0001|CE|XNZ5552^HPV Detection Status^NZPOCS|1|D^Detected^99NZHPVDT||||||F

OBX|0002|CE|XNZ5554^HPV Type^NZPOCS|2|16^^99NZHPVST||||||F

OBX|0003|CE|19772-3^Preparation technique^LN||LBC^Liquid based
cytology^99NZCYTOCOL|||||F||||||SRPTH^SurePath^99NZCLBCP

OBX|0004|CE|8100-0^Specimen Preparation^LN||BDONC^BD ONCLARITY HPVASSAY^99NZ
HPVTYP||||||F

OBX|0005|CE|19773-1^Recommendation^LN||H8^^BTH-2014||||||F
```

HPV result message – HPV Type 16 and Type 18 detected

Example:

```
MSH|^~\&|NCSR-HL7Client|Z1Z234-
Z|NCSR|NSU|20220805132101||ORU^R01|FF6538BE0044DB|P|2.4^NZL^1.0

PID|||ZZZ1234^^NHI||Smith^Jane^Grace^Jnr^Mrs^^L||19950101|F||11111|88 Great
Street^Workplace^Auckland^Northland^2015^New Zealand|

OBR|1|X113|X113A|11481-9^HPV Test
Result^LN|||202208021059|||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||202208021158||10FA
AM^Doe^Jane^^^^^^NZLMOH^^^^HI||||||202208101205||OTH|F|||||||||||||||||||F03026
^^HF|FXX888^^HF

OBX|1|CE|19772-3^Specimen Type^LN||LBC^Liquid based
cytology^|99NZCYTOCOL|||||C||||||SRPTH^^99NZCLBCP

OBX|2|CE|8100-0^Specimen Preparation^LN||ABTRT^^99NZHPVTYP||||||C

OBX|3|CE|XNZ5552^HPV Detection Status^NZPOCS||D^^99NZHPVDT||||||C

OBX|4|CE|XNZ5554^HPV Type^NZPOCS ||16^^99NZHPVST||||||C

OBX|5|CE|XNZ5554^HPV Type^NZPOCS ||18^^99NZHPVST||||||C

OBX|6|CE|19773-1^Recommendation^LN||H8^^BTH-2014||||||C
```

HPV result message – HPV not detected

Example:

```
MSH|^~\&|MEDLAB|Z9Z987-Z|NCSR|NSU|20220810120524||ORU^R01|013525250622210|P|2.4^N
ZL^1.0

PID|||ZZZ1234^^NHI^NZLMOH^NHI||Smith^^^^Ms^^L||19950101|F||11|88 Great
Street^Workplace^Auckland^Northland^2015^New Zealand|

OBR|0001|X111|X111A|11481-9^HPV Test
Result^LN|||202208021059|||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||202208021158||
10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||||202208101205||OTH|F|||||||||||||||||||
F03026^^HF|FXX888^^HF

OBX|0001|CE|XNZ5552^HPV Detection Status^NZPOCS ||ND^Not Detected^99NZHPVDT||||||F

OBX|0002|CE|19772-3^Preparation technique^LN||Liquid based
cytology^|99NZCYTOCOL||||||F||||||SRPTH^SurePath^99NZCLBCP

OBX|0003|CE|8100-0^Specimen Preparation^LN||BDONC^BD ONCLARITY HPV
ASSAY^99NZHPVTYP||||||F

OBX|0004|CE|19773-1^Recommendation^LN||H1^^BTH-2014||||||F
```

Combined HPV and cytology result message

Example:

```
MSH|^~\&|NCSR-
HL7Client|SD|NCSR|NSU|20230126132101||ORU^R01^ORU_R01|FF6538BE0044DB|P|2.4^NZL^1.0

PID|||ZZZ0001^^NHI^NZLMOH||Family Name^First Name^2nd Name^Title||19950101|F||88
Great Street^Workplace^Auckland^Northland^2015^New Zealand|

OBR|1|X113|X113A|11481-9^HPV Test
Result^LN|||20230124132101|||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||20230125132101
||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||||20230126132101||OTH|F|||||||||||||||||||||
F03026^^HF|FXX888^^HF

OBX|1|CE|19772-3^Specimen Type^LN||LBC^Liquid based
cytology^99NZCYTOCOL||||||F||||||SRPTH^SurePath^99NZCLBCP

OBX|2|CE|8100-0^Specimen Preparation^LN||ABTRT^^99NZHPVTYP||||||F

OBX|3|CE|XNZ5552^HPV Detection Status^NZPOCS||D^Detected^99NZHPVDT||||||F

OBX|4|CE|XNZ5554^HPV Type^NZPOCS||16^^99NZHPVST||||||F

OBX|5|CE|19763-2^Specimen Site^LN||R^Cervical^BTH-2014||||||F

OBX|6|CE|19764-0^Statement of Adequacy^LN||S1^^BTH-2014||||||F

OBX|7|CE|19762-4^General Category^LN||G2^^BTH-2014||||||F

OBX|8|CE|19765-7^Interpretation^LN||AG1^^BTH-2014||||||F

OBX|9|CE|19773-1^Recommendation^LN||H8^^BTH-2014||||||F
```

Histology result message

Example:

```
MSH|^~\&|NCSR-HL7Client|Z9Z987-
Z|NCSR|NSU|20220810164026||ORU^R01|FF654F0400F43A|P|2.4^NZL^1.0

PID|||ZZZ2222^^^NZLMOH||Smith^Jane^Grace^Jnr^Mrs^^L||19960917|F||11^^99NZETH|88 Great
Street^Workplace^Auckland^Northland^2015^New Zealand|

OBR||Placer Order Number|Filler Order Number|29757-2^Histology

Studies^LN|||202207011633|||10FAAM^^^^^^^^NZLMOH^^^^HI||||202207051633||013427^^^^^^^^

NZLMOH^^^^HI||||||202208100805||PAT|F|||||||||||||||||||FZZ999^^HF|FXX888^^HF

OBX|1|CE|22633-2^Site of Origin^LN||T83200^^SNM-1993||||||C

OBX|2|CE|22637-3^Final Diagnosis^LN||M67016^^SNM-1993||||||C

OBX|3|CE|19763-2^Specimen Site^LN||P83423^^SNM-1993||||||C
```

Referral for treatment message

Example:

```
MSH|^~\&|Gynaecology Plus x.xx|NCSP Register
Team|NCSP|NCSP|20130920154853||REF^I12|TECH_REF_0004_2|P|2.4^NZL^1.0||||||ASCII|||

RF1|A^Accepted^HL70283|R|MED^Medical^HL70281|||TECH_REF_0004|20130826120000||||

PRD|RP^Referring Provider^99NZPRRL|Test^Provider|No gprAddress||||Z1Z111^HF~10F


AAM^HI||

PRD|RT^Referred to Provider^99NZPRRL|Test^Refereet|Test Street Palmerston
North||||Z2Z222^HF~10ZAZA^HI||

PID|||ZZZ9999^^^NZLMOH||Family Name^First Name^2nd Name||DOB|F||11^New
Zealand European^99NZETH~12^Other European^99NZETH|88 Great
Street^Workplace^Auckland^Northland^2015^New Zealand|

DG1|1||HPVOL2^HPV other persistent low grade change - Second HPV detected other
and cytology result of Negative or ASCUS/LSIL
>50^99NZCOLPPRIORITY||20130905120000|F||||||||||||

NTE|1|P|NCSP notes: Example booking priority note Example diagnosis note|OC|

ORC|IN|TECH_REF_0004 ||||||||||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||||||||||

OBR|1|TECH_REF_0004 |TECH_REF_0004 |21978-2^Source of
Information^LN|||20130814120000|||||||20130823120000||10FAAM^Doe^Jane^^^^^^NZLMOH
^^^^HI|||||||||F||||||||||||||||||||

OBX|1|CE|21978-2^Source of Information^LN||HPVOL^HPV other with persistent low grade
change^99NZCOLPREASON||||||F||||||||

NTE|1|P|Abnormal screening smear - HPV other with persistent low grade change|OC|

OBX|2|CE|21978-2^Source of Information^LN||OTHR^Other^99NZREFMED||||||F||||||||

NTE|1|P|rebooked new episode|OC|

OBX|3|CE|21978-2^Source of Information^LN||99NZCOLPAPPOINTMENT^Appointment
Date^99NZCOLPAPPOINTMENT||||||F||||||||20131111

OBX|4|CE|21978-2^Source of Information^LN||F1^First follow-
up^99NZCOLPASSESSMENT||||||F||||||||

OBX|5|CE|21978-2^Source of Information^LN||COLP2013^2013
Standard^99NZCOLPSTANDARD||||||F||||||||
```

Referral deletion message

Example:

```
MSH|^~\&|AcmeGPsystem|Z1Z234-Z|NCSP|NCSP|20071027091513||
^REF_I14|TECH_REF_0004_2|P|2.4^NZL^1.0<cr>

RF1|||MED|||TECH_REF_0004|20071021<cr>

PRD|RP^Referring Provider^99NZPRRL|Test^Provider|No gprAddress||||Z1Z111^HF~10FAAM^
HI<cr>

PRD|RT^Referred to Provider^99NZPRRL|Test^Refereet|Test Street Palmerston
North||||Z2Z222^HF~10ZAZA^HI<cr>

PID|||ZZZ9999^^^NZLMOH||Smith^^^^Ms^^L||199606170000|F||11111^New
Zealand European^99NZETH~12100^British nfd^99NZETH|88 Great
Street^Workplace^Auckland^Northland^2015^New Zealand|^
```

Discharge summary without visit message

Example:

```
MSH|^~\&|Gynaecology Plus 10.83.0|Z9Z987-Z|NCSP|NCSP|20220810120946||REF^I12|COLP
ID|P|2.4^NZL^1.0||||||ASCII|||

RF1|A^Accepted^HL70283|R|DIS|||COLP ID|20220810000000||||

PRD|RP^Referring Provider^99NZPRRL|Test^Provider|No gprAddress||||Z1Z111^HF~10FAAM^
HI<cr>

PRD|RT^Referred to Provider^99NZPRRL|Test^Referee|Test Street Palmerston
North||||Z2Z222^HF~10ZAZA^HI<cr>

PID|||ZZZ7777^^NHI^NZLMOH||^John^George^^Prof^^L||198001010000|F||11|Address
1t^Suburb^City^^Postcode^^

ORC|IN|COLP IDA|||||||||10FAAM^Test^Provider^^^^^^NZLMOH^^^^HI|||||||||||||

OBR|1|COLP IDA|COLP IDA|21976-6^Cancer Outcome
Status^LN|||20220810000000|||||||20220810000000||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI
|||||||||F||||||||||||||||||||

OBX|1|CE|21976-6^Cancer Outcome Status^LN||SMT^Sample taker (i.e.
discharged)^99NZCOLPFLWUP||||||F||||||||

OBX|2|CE|21976-6^Cancer Outcome Status^LN||6M^6 months^99NZCOLPFLWTIME||||||F||||||||

OBX|3|CE|21976-6^Cancer Outcome Status^LN||A1^First assessment (new
case)^99NZCOLPASSESSMENT||||||F||||||||

OBX|4|CE|21976-6^Cancer Outcome Status^LN||COLP2023^2023
Standard^99COLPSTANDARD||||||F||||||||

OBX|5|CE|21976-6^Cancer Outcome Status^LN||N^No^99NZCOLPVSTATND||||||F||||||||

ORC|IN|COLP IDA|||||||||10FAAM^Test^Provider^^^^^^NZLMOH^^^^HI|||||||||||||

OBR|2|COLP IDB|COLP IDB|21978-2^Source of
Information^LN|||20220810000000|||||||20220810000000||10FAAM^Doe^Jane^^^^^^NZLMOH
^^^^HI|||||||||F||||||||||||||||||||

OBX|1|CE|21978-2^Source of Information^LN||LTR^Letter^99NZREFMED||||||F||||||||
```

Notification visit message

Example:

```
MSH|^~\&|Gynaecology Plus x.xx|Z1Z234-
Z|NCSP|NCSP|20131101113701||REF^I12|TECH_VST_0019_E|P|2.4^NZL^1.0||||||ASCII|||

RF1|A^Accepted^HL70283|R|NOT|||TECH_VST_0019_E|20131017120000||||

PRD|RP^Referring Provider^99NZPRRL|Test^Provider|No gprAddress||||Z1Z111^HF~10
FAAM^HI||

PRD|RT^Referred to Provider^99NZPRRL|Test^Referee|Test Street Palmerston
North||||Z2Z222^HF~10ZAZA^HI||

PID|||ZZZ6339^^NHI||Smith^Jane^Grace^Jnr^Mrs^^L||19821020|F||11~12|88 Great
Street^Workplace^Auckland^Northland^2015^New Zealand|

ORC|IN|COLP_ID||||||||||10FAAM^Test^Provider^^^^^^NZLMOH^^^^HI||||||||||||

OBR|1|Placer_Order_Num|Filler_Order_Num|21976-6^Cancer Outcome
Status^LN|||20131017120000|||10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI||||20131017120000||
10FAAM^Doe^Jane^^^^^^NZLMOH^^^^HI|||||||||F||||||||||||||||||||

OBX|1|CE|19763-2^Specimen Site ^LN||R^Cervical^99NZCOLPBIOPSYSITE||||||F

OBX|2|CE|21976-6^Cancer Outcome Status^LN||COLP2023^2023
Standard^99COLPSTANDARD||||||F||||||||

OBX|3|CE|21976-6^Cancer Outcome Status^LN||F1^First follow-
up^99NZCOLPASSESSMENT||||||F||||||||

OBX|4|CE|21976-6^Cancer Outcome Status^LN||Y^Yes^99NZCOLPPERFORMED||||||F||||||||

OBX|5|CE|21976-6^Cancer Outcome Status^LN||REV^Review/results
discussed^99NZCOLPACTION||||||F||||||||

OBX|6|CE|21976-6^Cancer Outcome Status^LN||COMPL^Completely^99NZCOLPTZ||||||F||||||||

OBX|6|CE|21976-6^Cancer Outcome Status^LN||COMPL^Completely^99NZCOLSCJ||||||F||||||||

OBX|3|CE|21976-6^Cancer Outcome Status^LN||ABML^Abnormal^99NZCOLPAPR||||||F||||||||

OBX|3|CE|21976-6^Cancer Outcome Status^LN||L^Low grade
squamous^99NZCOLPGRADE||||||F||||||||

OBX|7|CE|21976-6^Cancer Outcome Status^LN||N^No^99NZCOLPLESION||||||F||||||||

OBX|10|CE|21976-6^Cancer Outcome Status^LN||ELCT^Wireloop Excisional
Procedure^99NZCOLPACTION||||||F||||||||
```

```
OBX|11|CE|21976-6^Cancer Outcome Status^LN||HPV^hrHPV
test^99NZCOLPACTION||||||F||||||||

OBX|12|CE|21976-6^Cancer Outcome Status^LN||OTHR^^99NZCOLPACTION||||||F||||||||

NTE|1|P|Colposcope used. Cervical Opinion: HPV / CIN1. Biopsy: Excision biopsy(s).
Other Biopsy: No other biopsies. Treatment: Lletz. Future Plan: Follow-up
required|OC|

OBX|14|CE|21976-6^Cancer Outcome Status^LN||N^No^99NZCOLPIMAGE||||||F

OBX|15|CE|21976-6^Cancer Outcome
Status^LN||LOCAL^Local^99NZCOLPANAESTHESIA||||||F||||||||

OBX|16|CE|21976-6^Cancer Outcome
Status^LN||COLP^Colposcopist^99NZCOLPFLWUP||||||F||||||||

OBX|17|CE|21976-6^Cancer Outcome Status^LN||6M^6
months^99NZCOLPFLWTIME||||||F||||||||

PV1||O|||||||||||||||||||||||||||||||||||||||||||20131017120000||||||||
```

Cancel visit message

Example:

```
MSH|^~\&|Gynaecology Plus 9.68.0|Z9Z987-Z|NCSP|NCSP|20220804054445||REF^I12|COLP
ID|P|2.4^NZL^1.0||||||ASCII|||

RF1|C^Cancelled^HL70283|R|NOT|||COLP ID|20220804000000||||

PRD|RP^Referring Provider^99NZPRRL|Test^Provider|No gprAddress||||Z1Z111^HF~10FAAM
^HI||

PRD|RT^Referred to Provider^99NZPRRL|Test^Referee|Test Street Palmerston
North||||Z2Z222^HF~10ZAZA^HI||

PID|||ZZZ6339^^NHI^NZLMOH^NHI||Smith^^^^Ms^^L||19821020|F||11111|10 EXAMPLE
STREET^SUBURB^^^2100^NEW ZEALAND

PV1||O|||||||||||||||||||||||||||||||||||||||||||20131017120000|||||||
```

DNA message

Example:

```
MSH|^~\&|Gynaecology Plus 7.19.0|Z1Z234-Z|NCSP|NCSP|20220809174954||REF^I12|COLP
ID|P|2.4^NZL^1.0||||||ASCII|||

RF1|A^Accepted^HL70283|R|DNA^Did Not Attend^HL70281|||COLP ID|20211104120000||||

PRD|RP^Referring Provider^99NZPRRL|Test^Provider|No gprAddress||||Z1Z111^HF~10FAAM^
HI||

PRD|RT^Referred to Provider^99NZPRRL|Test^Referee|Test Street Palmerston
North||||Z2Z222^HF~10ZAZA^HI||

PID|||NHI^^^NZLMOH||Smith^^^^Ms^^L||198001010000|F||11111^New Zealand
European^99NZETH|88 Great Street^Workplace^Auckland^Northland^2015^New Zealand|

ORC|IN|COLP_ID|||||||||10FAAM^Test^Provider^^^^^^NZLMOH^^^^HI|||||||||||||

OBR|1|COLP ID|COLP ID|21976-6^Cancer Outcome
Status^LN|||20211104120000|||||||20211104120000||||||||||F|||||||||||||||||||||

OBX|1|CE|21976-6^Cancer Outcome Status^LN||COLP2023^2023
Standard^99COLPSTANDARD||||||F|||||||

OBX|1|CE|21976-6^Cancer Outcome Status^LN||FSA^First specialist
assessment^99NZCOLPPURP||||||F|||||||

OBX|4|CE|21976-6^Cancer Outcome Status^LN||OTH^Other^99NZCOLPDNAREASON||||||F|||||||

NTE|4|L|DNA other reason: Unknown|OC|

OBX|4|CE|21976-6^Cancer Outcome Status^LN||2M^2 months^99NZCOLPFLWTIME||||||F|||||||

PV1||O|||||||||||||||||||||||||||||||||||||||||||20211104120000|||||||

PV2|||||||||20221110100000
```

Cancel DNA message

Example:

```
MSH|^~\&|Gynaecology Plus 7.19.0|Z9Z987-Z|NCSP|NCSP|20211005164906||REF^I12|COLP
ID|P|2.4^NZL^1.0||||||ASCII|||

RF1|C^Cancelled^HL70283|R|DNA^Did Not Attend^HL70281|||COLP ID|20211004120000||||

PRD|RP^Referring Provider^99NZPRRL|Test^Provider|No gprAddress||||Z1Z111^HF~10FAAM^
HI||

PRD|RT^Referred to Provider^99NZPRRL|Test^Referee|Test Street Palmerston
North||||Z2Z222^HF~10ZAZA^HI||

PID|||NHI^^NHI||^John^George^^Prof^^L||198001010000|F||11^New Zealand
European^99NZETH~12^Other European^99NZETH|10 EXAMPLE STREET^SUBURB^^^2100^NEW
ZEALAND

PV1||O|||||||||||||||||||||||||||||||||||||||||||20211104120000|||||||||

PV2|||||||||20221110100000
```

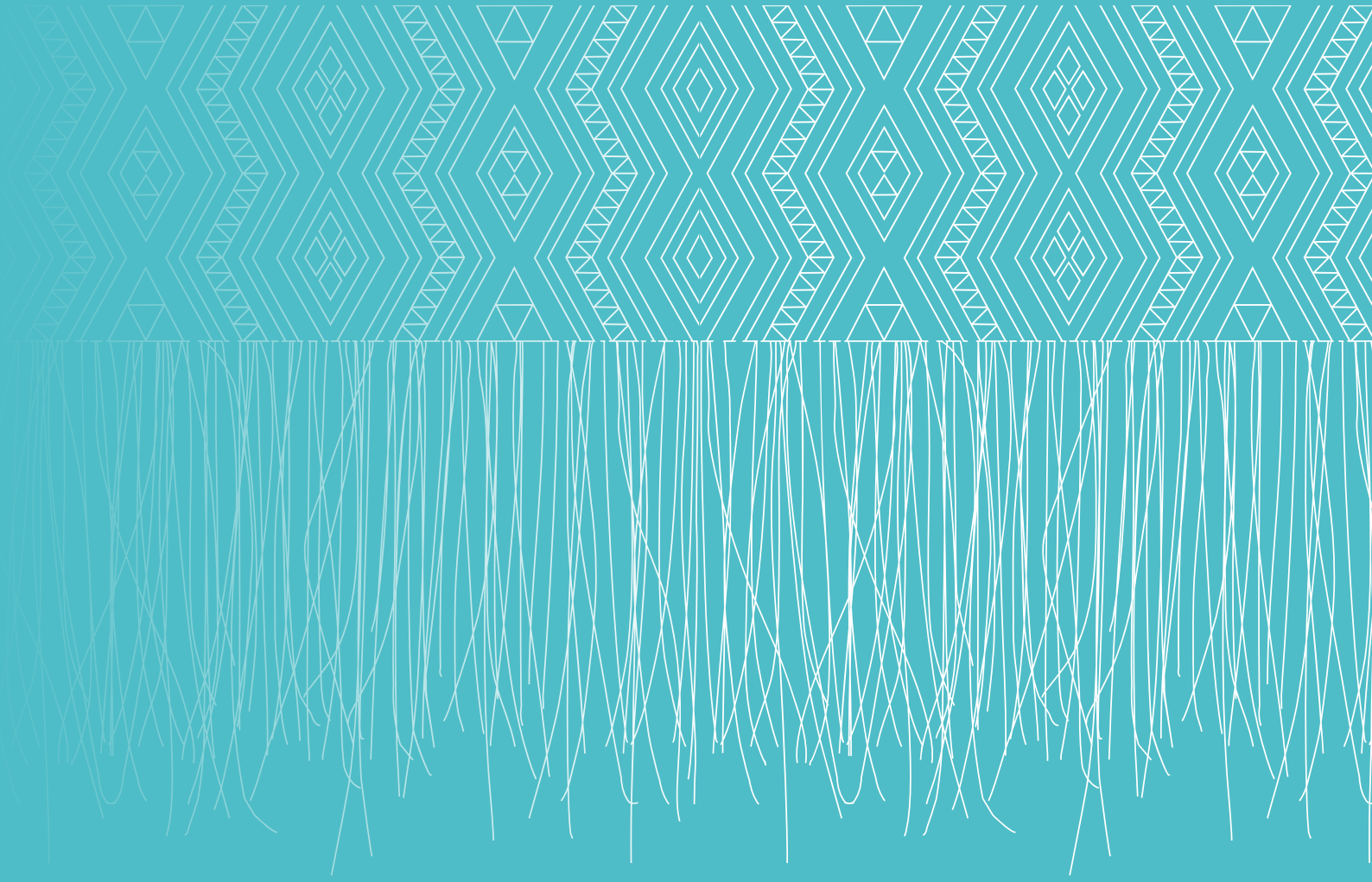
Reporting errors back to senders

Example:

```
MSH|^~\&|NCSR|NSU|Sample Lab System|Z9Z987-Z|200807221908||RRI^I12|463165126|P|
2.4^NZL^1.0

MSA|AR|221932|The incoming message has been rejected due to an
error.|||201^Unsupported event code

ERR|OBX^10^5^103&TVN. '' not valid for 'Visit Purpose'&HL70357
```



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