ACCESS Health Digital
Powering the Future of Healthcare
A division of ACCESS Health International

Microservice Specification (Functional)

Consultation 'Subjective'

Statement of Confidentiality

1. Functional Area –Consultation (S)

1.1. Purpose

This document describes the Functional and Technical Requirement Specification (BRS) for Consultation service in a primary and specialist care setting. Since consultation service is a complex functional area consisting of multiple smaller service areas, we have divided it into smaller microservices. We have followed the SOAP note (Subjective, Objective, Assessment, Plan) method which is a worldwide adopted method of writing a clinical summary for a patient encounter. This document covers specifications for "Subjective" information which is captured by a Doctor/ Nurse during a patient consultation.

1.2. Intended Audience

This document is intended for the Product Engineering team to commence development of 'Consultation (S)' microservice and the audience would comprise of

1.2.1. Development, Design & Implementation Team which may include Architects, Designers, Developers, and Business Analysts
1.2.2. Key stakeholders in the government at central and state levels

1.3. Overview

In any clinical setting during a patient consultation, the healthcare provider (Doctor/ Nurse) captures patient's critical health information which is required to arrive at the diagnosis and treatment plan for a patient. There are various ways or templates available for capturing such information. A SOAP (Subjective, Objective, Assessment & Plan) note in consultation is a way for healthcare professionals to document the information in a structured & organized way and is being used worldwide by the medical professionals. It also guides the professionals for evaluating information and provides a cognitive framework for clinical reasoning. The structure of documentation is a checklist with defined flow that serves as a cognitive aid and a potential index to capture and retrieve information about a patient's health. SOAP is an acronym for Subjective, Objective, Assessment and Plan that classifies the health information captured according to the source or type of information and facilitates clinical decision making.

Any information which is subjective i.e. are personal views, experiences or feelings or information provided by the patient himself is classified as subjective" viz. captured as reported.

Subjective information can comprise of the following sections-

- **Chief complaints**- Any symptoms or complaints that were reported by the patient in verbatim to the healthcare provider can be recorded under chief complaints. It refers to the reason of patient's visit to the clinical facility or setting. A patient can report one or multiple chief complaints if present that will help in arriving at a diagnosis. A chief complaint can also be used to start a clinical episode the patient may require a treatment for e.g.: episode of headache which may require multiple visits
- **History of present illness**- This is the section where patient elaborates or provides more information about the chief complaints reported by him/her. This may include recording more details or parameters like "**Onset, Location, Duration, Characterization, Aggravating factors** (if its better or worse during a course of day), **Alleviating factors**, **Radiation** (if the symptom is restricted to an area or moves), and **Severity**. Though capturing all the parameters mentioned are not mandatory for every clinical setting. Capturing information about these parameters depends upon the type of complaint reported and can be template driven.
- **Patient History** – This section is very critical specially for the first visit of a new patient. This section is used to capture patient's clinical history (Past surgeries, past notifiable diagnosis, comorbidities, active medication lists, patient reported allergies, immunizations etc.), family history and social history. This is critical to set the context for a diagnosis and treatment plan.

1.4. Scope & Not in Scope

Functionality scope includes:

- Patient Search

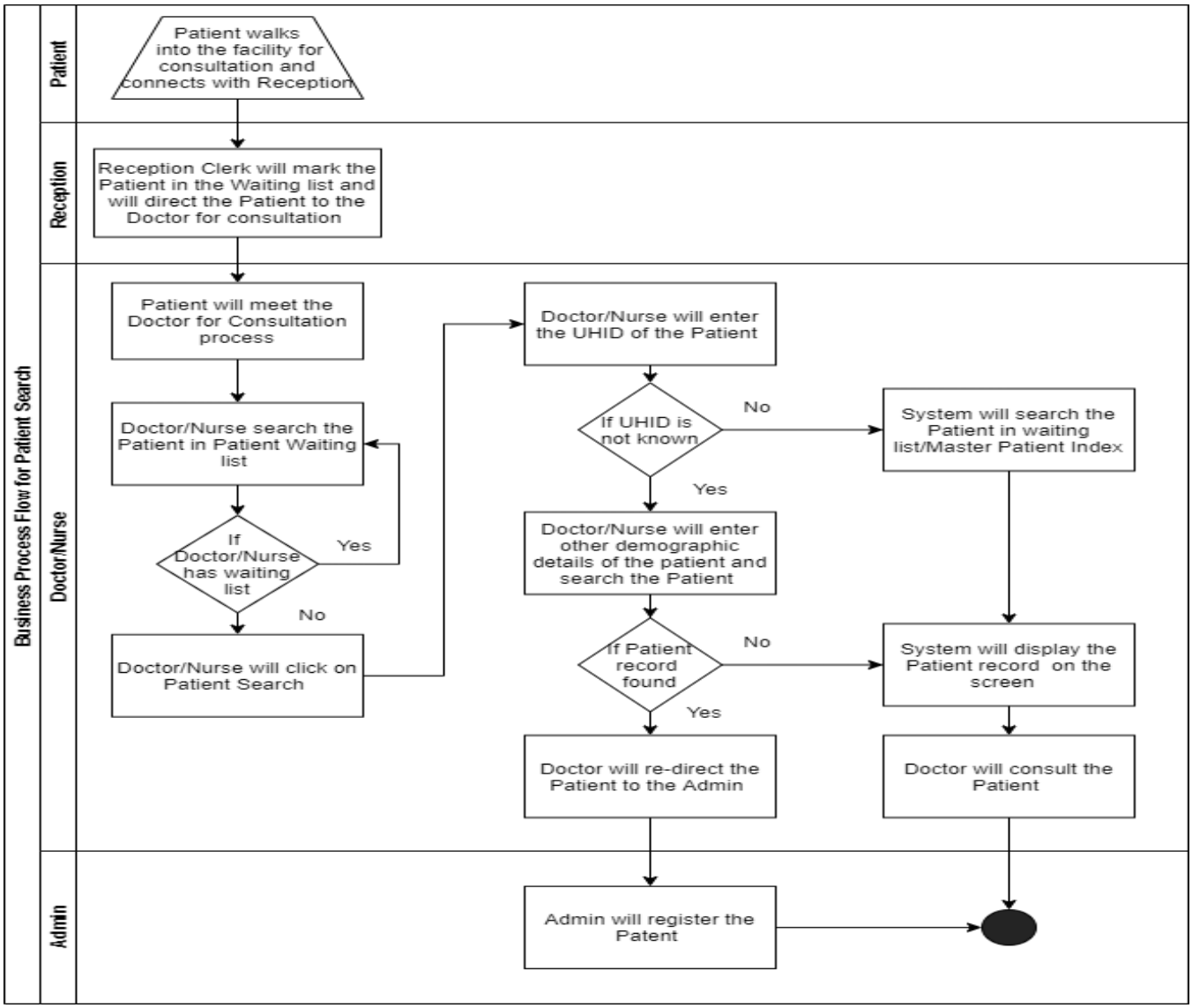
- Consultation (Subjective)

1.5. Business Process Flow

1.5.1. Business Process Flow for Patient Search

Description	Patient search is used to search an existing patient in an application. Once a patient gets registered his/her details are saved in the Master Patient Index of that application or facility and can be retrieved as in when required to make any transaction against the patient. A patient can be searched either using the UHID (Unique health Identification number or a facility allocated Registration or identification number or a combination of two or more demographic fields can be used to search a unique patient. A patient search functionality can be used at multiple places in a health delivery information system. Patient search can be used to search patient in a waiting list or even in the consultation screen to extract patient's medical record where patient comes for a repeat visit.
Users	Doctor, Nurse
Pre-requisites	Registered Patient
Business Process Details	A patient search is the process to look-up for a specific patient from the patient waitlist or the HDIS application. These could be done by searching for either the patient's UHID or basic demographic details.
Steps	• Patient walks-in to the consultation room at the defined time and meets the consulting nurse or doctor. • If doctor/nurse has a waiting list, can search patient directly in the waiting list with name or his/her UHID. • In cases where the application doesn't have a patient waitlist, Doctor/ Nurse will click on patient search and enter the unique health identification number (if known) to search the patient. • If the UHID is not known user can use combination of two or more patient's demographic details like patient's name and mobile number or date of birth and mobile number etc. • Upon entering the details, they will click on search. • System will search the waiting list or master patient index and opens the relevant patient record
Outputs	• Patient's record found with encounter and episode details filled (Calls Patient Visit Microservice)
Messages & Alerts	• System alerts if patient not found

Visio: Patient search



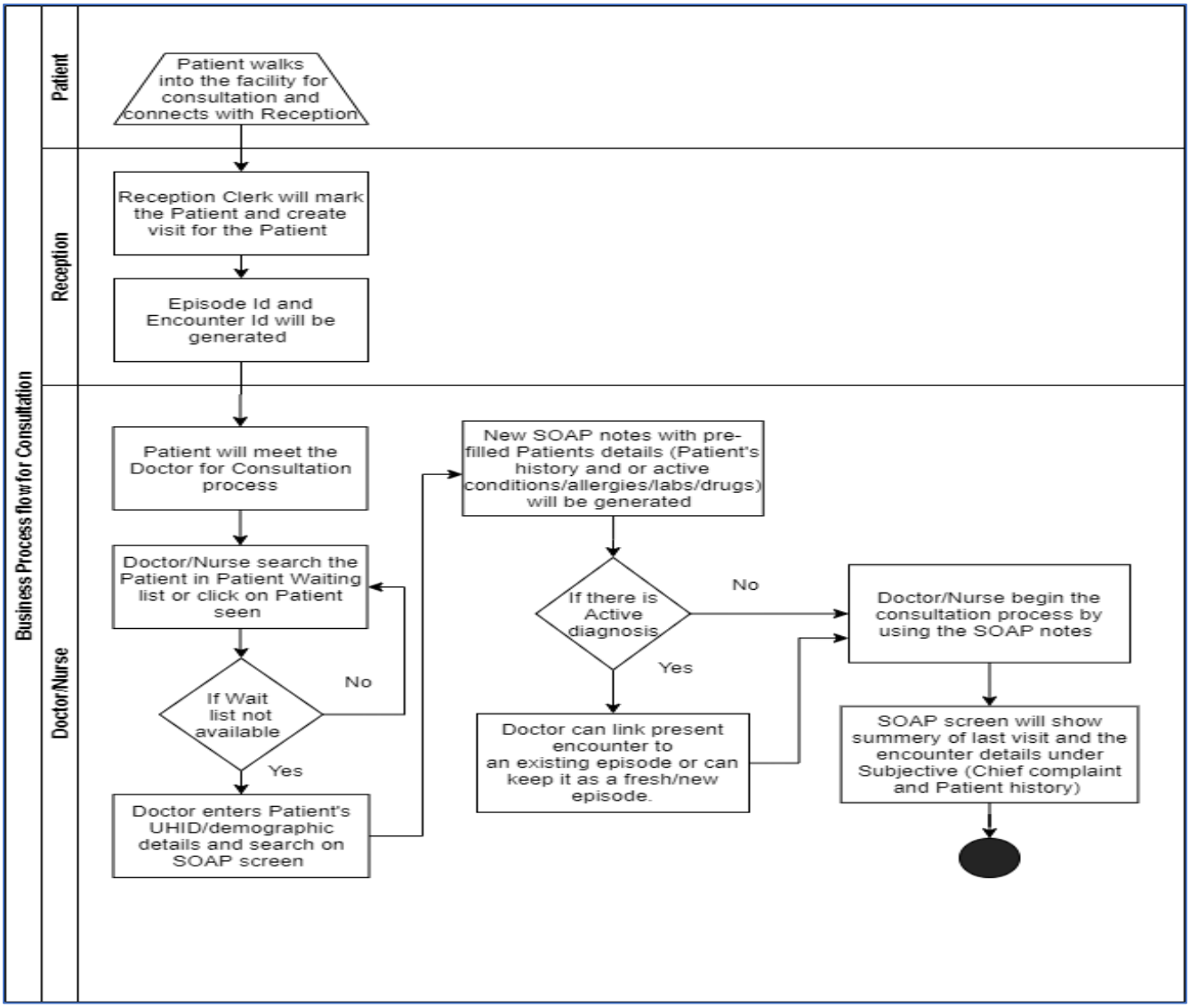
1.5.2. Business Process Flow for Consultation (S)

Description	As shared earlier, the S (Subjective) component of a SOAP note covers the following: • **Chief Complaints (CC)** – It is the presenting problem reported by the patient. It can be a symptom, condition, previous diagnosis or a problem narrated by the patient • **History of Present Illness (HPI)** – It is the elaboration of CC and is organized as OLDCARTS – Onset, Location, Duration, Characterization, Alleviating & Aggravating Factors, Radiation, and Severity. • **Patient History** – It covers the clinical and medical history (Active medications, comorbidities, closed yet notifiable diagnosis, Surgical History, Family History, Social History and Allergies).
Users	Nurse, Doctor
Pre-requisites	• Patient is registered • Patient visit is marked on patient's arrival. • Episode ID and Encounter ID are created which will be utilized by this microservice by calling "Visit Management Microservice".

Business Process Details	The various sections under the "Subjective" component run parallelly while consulting with the patient. As a result, some of the information may be entered as the patient narrates or answers while some may have to be interpreted (by the nurses' or doctor's knowledge or by referring to documents on the system). The patients usually do not follow any order when they narrate the subjective aspects of their problem and it is the skill of the nurse or doctor to streamline the information. SOAP notes are exactly meant to streamline such information and guide the nurse or doctor to note the complete set of clinically critical and relevant information. It also assists the nurse or doctor to capture the subjective sets of information that would lead to a correct diagnosis and care plan. Soon after a visit is marked for a registered patient on his/her arrival at the facility an episode is created by the system and is associated with an episode ID. Simultaneously the visit will fall under this episode and will have an encounter ID that will get linked to the episode ID. An episode can have one or multiple encounter IDs linked to it until the doctor closes an active episode. All the clinical information of the patient gets recorded against the encounter ID under an active episode for the corresponding visits. An application should have a functionality to check if the new encounter should be associated with an open episode or is altogether a separate episode where the chief complaints and diagnosis are different. A new SOAP note is opened by searching the patient in the SOAP (Consultation screen) or the patient wait list. It will only record the information facilitated during the present visit. Any past visit data is moved to patient's history segment in the opened SOAP note which are no more active.
Steps	• When a registered patient arrives to get a consultation service rendered, a visit is marked and created for the patient for a consultation service against a doctor/nurse. • This visit creation generates an episode ID and a linked encounter ID for which the encounter details will be captured by the doctor/nurse in further steps. • On marking the visit patient waitlist for consultation shows the patient details if that functionality exists in the HDIS/EMR application. • Doctor/nurse can search patient in the patient waitlist or directly click on the patient seen in the waitlist. • In cases where the consultation module does not have a patient waitlist a patient record or new SOAP note for the patient can be opened by searching the patient in the SOAP screen directly using UHID or other patient demographic parameters. • On a successful search, a fresh SOAP note is opened with prefilled demographic details of the patient and associated episode and encounter ID with present date. • It will also have history or active conditions/allergies/labs/drugs etc. if the patient had consulted the doctor before. • At this time when there is active diagnosis a doctor can link present encounter to an existing episode or can keep it as a fresh/new episode. • The nurse or doctor may begin the consultation process by using the SOAP note as a guide and starts entering the clinical details for the patient. • The SOAP screen will show a summary of last visit if any. Rest of the present encounter details under **'Subjective'**are entered as follows: • **Chief Complaints** » Doctor/ Nurse asks the patient about the presenting problem and let them narrate it in their own words. » Doctor/ Nurse enters the reported problem by using the lookup function from a symptoms master list or ICD10 symptom list. (Recommended) • **History of Present Illness** - Doctor/ Nurse also adds more details about the reported chief complaint which falls under the "History of present Illness" functionality and may include details about the following: » Onset » Location » Duration » Characterization » Alleviating/ Aggravating Factors

	» Radiation » Time (Severity) • The consulting nurse and doctor may also use a predefined template or questionnaire to ask relevant questions from the patient to arrive at specific information. • Wherever applicable, drop downs may be available to fill in the specific information from standard code directories or value sets as recommended by National Digital Health Blueprint (NDHB). Details of the applicable code directories are also provided in the MDDS document as well as in the "E-encounter Note object". • Upon capturing, the complete set of information, the nurse or doctor reviews the information. Add comments if any and saves the information. • System alerts on missing gaps or information errors • **Patient History:** The note should have the following sub sections to capture patient's history with structured template:***(Details about the data elements for these sections are provided in the e-encounter note)*** » Medical » Surgical » Family » Social • Please note history for the patient is captured for the first visit, in later visits the history is only reviewed by the Doctor for decision making that was captured previously. Though Doctor may have a privilege to add more in the history section. The history may also capture investigations and documentation created by other doctors/ consultants. • Also note all the diagnosis that will be closed by the Doctor in future visits will move to patient medical history and will be seen under the history section. • Upon capturing, the complete set of information, the nurse or doctor reviews the information. • Add comments if any and saves the information. • System alert on missing gaps or information errors. • **Allergies:** This section is used to capture any allergies for the patient that may include a food, drug, environmental allergies etc. • In case of existing patient, allergies may be prefilled, and active allergies should be always visible in the consultation screen. • Upon capturing, the complete set of information, the nurse or doctor reviews the information. • Add comments if any and saves the information. • System alert on missing gaps or information errors.
Outputs	• Filled & saved Subjective section in the SOAP note
Messages & Alerts	• System alert on missing information and/ or validation gaps if any

Visio: Consultation Process



1.6. Required MDDS Data Elements

1.6.1. Entity: Generic

Data Elements	MDDS Codes	Data Format	Max. size	Code Directory
Time	05.001.0001	HH:MM :SS	8	
Date		dd/mm/yyyy	10	Refer to G00.01
Alternate Identifier Type	05.001.0003	Integer	2	Refer to CD05.053
Alternate Identifier	05.001.0004	Varchar	254	
Alternate Identifier Format	05.001.0005	Bytes	20	
Comments	05.001.0007	Varchar	99	
Unit of Measurement	05.001.0018	Varchar	25	Refer to CD05.025
Healthcare Application Number	05.001.0019	Integer	5	Refer to CD05.013
Code System Qualifier Type	05.001.0020	Char	1	
Code System Qualifier	05.001.0021	Varchar	15	Refer to CD05.032
System of Medicine	05.001.0022	Integer	2	Refer to CD05.030
Document ID	05.001.0023	Varchar	50	
Reference Document ID	05.001.0024	Varchar	50	
Non-Clinical Document Type	05.001.0025	Integer	2	Refer to CD05.034
Reference Document	05.001.0026	Varchar	254	
Non-Clinical Document	05.001.0027	Varchar	4096	

1.6.2. Entity: Person

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory
Unique Health Identification Number		Integer	12	Refer to G01.01
Alternate Unique Identification Number (UID) Type	05.002.0001	Integer	2	Refer to CD05.007
Alternate Unique Identification Number (UID)	05.002.0002	Varchar	Max. Size =18 10 - PAN Card 08 - Passport No. 18 - Voter ID 18 - Any other Identifier	
Time of Birth	05.002.0003	HH:MM :SS	8	
Nationality Code	05.002.0006	Integer	1	

Multiple Birth Indicator	05.002.0007	Integer	1	
Person Name Type	05.002.0008	Char	1	
Phone Owner	05.002.0009	Integer	2	
Contact Type	05.002.0010	Integer	2	Refer to CD05.054
Contact Person Name	05.002.0011			Refer to G01.02
Contact Relationship Code	05.002.0012			Refer to G01.08- 01
Contact Person Address	05.002.0013			Refer to G02.03
Contact Person landline telephone number	05.002.0014	Varchar	8	Refer to G00.06- 01-05
Contact Person mobile telephone number	05.002.0015	Char	10	Refer to G00.06- 02-05
Contact Person Email Address/URL	05.002.0016	Varchar	254	Refer to G00.09
Author Name	05.002.0017			Refer to G01.02
Author ID	05.002.0032	Varchar	18	
Author Landline Telephone Number	05.002.0018	Varchar	8	Refer to G00.06- 02-05
Author Mobile number	05.002.0019	Char	10	Refer to G00.09
Author Email Address/URL	05.002.0020	Varchar	254	G01.02
Family Member Gender	05.002.0022	Char	1	Refer to G01.03
Family Member Medical History	05.002.0024	Varchar	4096	
Family Member UID Number	05.002.0025			Refer to G01.01
Family Member Relationship	05.002.0027			
Family Member Relationship Description	05.002.0028	Varchar	99	
Family Member Age	05.002.0029	Age year(s) (yyy) Integer(3) AgeMonth(s) (mm) Integer(2) AgeDay(s) (dd) Integer (2) 999,99, 99 no precedi ng zero [years, months , days]	7	
Special Vulnerability	05.002.0030	Integer	2	

1.6.3. Entity: Patient

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory
Provider’s Patient ID	05.003.0001	Varchar	18	
Patient Name	05.003.0002			Refer to G01.02

Patient Age	05.003.0003	Age year(s) (yyy) Integer(3) AgeMonth(s) (mm) Integer(2) AgeDay(s) (dd) Integer (2) Default Value: 999,99, 99 no precedi ng zero [years, months , days]	7	
Birth Order	05.003.0004	Integer	1	
Parity	05.003.0005	Integer	2	
Gravida	05.003.0006	Integer	2	
Identity Unknown Indicator	05.003.0007	Integer	1	
Patient Mobile Number	05.003.0012	Char	10	Refer to G00.09
Patient Arrival Time	05.003.0014	HH:MM :SS	8	
Patient Arrival Date	05.003.0015	dd/mm/yyyy	10	Refer to G00.01
Reason for visit	05.003.0016	Varchar	99	
Pregnancy indicator	05.003.0017	Integer	1	
Duration of pregnancy	05.003.0018	Integer	2	

1.6.4. Entity: Employee

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory
Employee Name	05.004.0001			Refer to G01.02
Employee Gender Code	05.004.0003			Refer to G01.03
Employee Telephone Number	05.004.0006	Varchar	8	Refer to G00.06- 02-05
Employee Mobile Number	05.004.0007	Char	10	Refer to G00.09
Employee E-mail Address	05.004.0008	Varchar	254	Refer to G01.02
Academic Qualification Level Code	05.004.0012	Integer	2	Refer to CD05.095
Academic Qualification Type Code	05.004.0013	Integer	2	Refer to CD05.096
Academic Qualification Free Text	05.004.0014	Varchar	99	
Employee ID	05.004.0053	Varchar	18	
Employee Designation Code	05.004.0056	Integer	3	

1.6.5. Entity: Provider

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory

Unique Individual Health Care Provider Number	05.005.0001	Varchar	18	
Unique Individual Health Care Provider Number Type	05.005.0002	Integer	2	Refer to CD05.008.
Registration Authority Number	05.005.0003	Integer	3	Refer to CD05.012
Health Care Provider Landline Telephone Number	05.005.0006	Varchar	8	Refer to G00.06- 02-05
Health Care Provider Mobile Number	05.005.0007	Char	10	Refer to G00.09
Health Care Provider Email Address/URL	05.005.0008	Varchar	254	Refer to G01.02
Health Care Provider Name	05.005.0009			Refer to G01.02
Health Care Provider Role code	05.005.0010	Integer	2	Refer to CD05.009
Health Care Provider Role Free Text	05.005.0011	Varchar	99	
Health Care Provider Type	05.005.0012	Integer	2	Refer to CD05.010

1.6.6. Entity: Facility

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory
Unique Facility Identification Number	05.008.0001	Integer	10	Refer to CD05.001
Facility Type Code	05.008.0002	Integer	2	Refer to CD05.002
Facility Service Code	05.008.0009	Varchar	18	Refer to CD05.043
Facility Specialty Code	05.008.0010	Integer	3	Refer to CD05.011
Department Name	05.008.0015	Varchar	99	Refer to CD05.090
Ward Name	05.008.0016	Varchar	99	Refer to CD05.088
Referral Facility Identification Number	05.008.0019	Integer	10	Refer to CD05.001
Referral Facility Type Code	05.008.0020	Integer	2	Refer to CD05.002
Referral from Facility Identification Number	05.008.0021	Integer	10	Refer to CD05.001
Referral from Facility Type Code	05.008.0022	Integer	2	Refer to CD05.002
Facility Global Unique Identifier (GUID)	05.008.0025	Bits	16	

1.6.7. Entity: Episode

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory
Episode ID	05.009.0001			
Episode Type	05.009.0002			

1.6.8. Entity: Encounter

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory
Encounter ID	05.010.0001	Varchar	18	
Encounter Type	05.010.0002	Integer	2	Refer to CD05.047
Encounter Type Description	05.010.0003	Varchar	254	
Encounter Time	05.010.0004	HH:MM:SS	8	
Encounter Date	05.010.0005	dd/mm/yyyy	10	Refer to G00.01

1.6.9. Entity: Emergency

Data Elements	MDDS Codes	Data Format	Maximum size	Code Directory
Patient Arrival Date	05.013.0001	dd/mm/yyyy	10	Refer to G00.01
Patient Arrival Time	05.013.0002	HH:MM:SS	8	
Patient Status	05.013.0003	Integer	2	
Ambulatory Status	05.013.0004	Char	2	Refer to CD05.065
MLC Indicator	05.013.0005	Integer	1	
Mass Injury Indicator	05.013.0006	Integer	1	
Cause of Mass Injury	05.013.0007	Integer	2	Refer to CD05.066
Accident Location	05.013.0008			Refer to G02.03
Referral Category	05.013.0009	Char	1	Refer to CD05.067
Date of Referral	05.013.0010	dd/mm/yyyy	10	Refer to G00.01
Time of Referral	05.013.0011	HH:MM:SS	8	
Provider Facility Identification Number	05.013.0013	Integer	10	Refer to CD05.001
Reason for Referral	05.013.0012	Varchar	254	

1.6.10. Entity: Outreach

Data Elements	MDDS Codes	Data Size	Maximum Size	Code Directory
Outreach Service Delivery Place Name	05.014.0001			Refer to G02.02
Outreach Service Delivery Place Address	05.014.0002			Refer to G02.03
Outreach Service Delivery Place Type	05.014.0003	Integer	2	Refer to CD05.047

Outreach Service Purpose	05.014.0004	Integer	2	Refer to CD05.127
Outreach Service Provider Name	05.014.0005			Refer to G01.02
Outreach Service Provider Type	05.014.0006	Integer	2	Refer to CD05.010
Outreach Service Provider Identification Number	05.014.0007	Varchar	18	
Referral Support Indicator	05.014.0010	Integer	1	

1.6.11. Entity: Allergy

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory
Allergy Product Code	05.018.0001	Integer	5	Refer to CD05.018
Allergy Product Description	05.018.0002	Varchar	99	
Allergy Reaction Code	05.018.0003	Varchar	10	Refer to CD05.019
Allergy Reaction Name	05.018.0004	Varchar	99	Refer to CD05.019
Allergy Reaction Description	05.018.0005	Varchar	99	
Allergy Severity Code	05.018.0006	Integer	2	Refer to CD05.020
Allergy Severity Description	05.018.0007	Varchar	99	
Allergy Status	05.018.0008	Integer	2	Refer to CD05.021
Allergy History	05.018.0009	Varchar	4096	
Adverse Event Type	05.018.0010	Varchar	10	Refer to CD05.019

1.6.12. Entity: Clinical Notes

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory
Author Time	05.019.0001	HH:MM:SS	8	
Author Date	05.019.0002	dd/mm/yyyy	10	Refer to G00.01
Reference	05.019.0003	Varchar	99	
Information Source Name	05.019.0004	Varchar	99	
Clinical Document	05.019.0005	Varchar	4096	
Clinical Document Type	05.019.0006	Integer	2	Refer to CD05.046
Patient Age at onset of health condition	05.019.0009	Ageyear(s) (yyy) Integer(3) AgeMonth(s) (mm) Integer(2) AgeDay(s) (dd)	7	
Family Member Age at Onset of Health Condition	05.019.0010	Ageyear(s) (yyy) Integer(3) AgeMonth(s) (mm) Integer(2) AgeDay(s) (dd)	7	

		Integer (2) 999,99, 99 no precedi ng zero [years, months , days]		
Family Member Cause of Death Known Indicator	05.019.0011	Integer	1	
Family Member Age at Death	05.019.0012	Ageyear(s) (yyy) Integer(3) AgeMonth(s) (mm) Integer(2) AgeDay(s) (dd) Integer (2) 999,99, 99 no precedi ng zero [years, months , days]	7	
Family Member Multiple Birth Status	05.019.0013	Integer	2	
Family Member Multiple Birth Order	05.019.0014	Integer	2	

1.6.13. Entity: Lab

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory
Result Date	05.021.0001	dd/mm/yyyy	10	Refer to G00.01
Result Time	05.021.0002	HH:MM:SS	8	
Result Type	05.021.0003	Varchar	10	Refer to CD05.024
Result Status	05.021.0004	Char	2	Refer to CD05.038
Result Value	05.021.0005	Varchar	20	
Result Interpretation	05.021.0006	Integer	2	Refer to CD05.135
Result Reference Range - lower limit	05.021.0007	Integer	7	Refer to CD05.039
Result Reference Range - Upper limit	05.021.0008	Integer	7	Refer to CD05.039
Result Category	05.021.0009	Varchar	10	Refer to CD05.040
Specimen Type	05.021.0011	Integer	3	Refer to CD05.049
Lab Order Code	05.021.0022	Varchar	10	Refer to CD05.024
Lab ID	05.021.0023	Integer	10	Refer to CD05.122
Lab Type	05.021.0024	Integer	1	
Lab Result ID	05.021.0025	Varchar	10	

1.6.14. Entity: Radiology

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory

Radiology Center ID	05.022.0001	Integer	10	Refer to CD05.094
Radiology Center Type	05.022.0002	Integer	1	Refer to.094
Radiology Procedure Date	05.022.0003	dd/mm/yyyy	10	Refer to G00.01
Radiology Procedure Time	05.022.0004	HH:MM:SS	8	
Radiology Technician Comments	05.022.0005	Varchar	99	
Radiologist's Impression	05.022.0006	Varchar	254	
Radiology Procedure Name	05.022.0007	Varchar	255	Refer to CD05.043
Radiology Procedure Code	05.022.0008	Varchar	18	Refer to CD05.043
Radiology Result Status	05.022.0009			Refer to CD05.038
Radiology Result ID	05.022.0010	Varchar	10	

1.6.15. Entity: Remission

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory
Date of Remission	05.032.0001	dd/mm/yyyy	10	Refer to G00.01
Remission Type	05.032.0002	Integer	2	Refer to CD05.022
Remission Name	05.032.0003	Varchar	99	Refer to CD05.019
Remission Code	05.032.0004	Varchar	10	Refer to CD05.019
Remission Description	05.032.0005	Varchar	254	

1.6.16. Entity: Complications

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory
Date of Complication	05.033.0001	dd/mm/yyyy	10	Refer to G00.01
Complication Type	05.033.0002	Integer	2	Refer to CD05.022
Complication Name	05.033.0003	Varchar	99	Refer to CD05.019
Complication Code	05.033.0004	Varchar	10	Refer to CD05.019
Complication Description	05.033.0005	Varchar	20	

1.6.17. Entity: Relapse

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory
Date of Relapse	05.034.0001	dd/mm/yyyy	10	Refer to G00.01
Relapse Type	05.034.0002	Interger	2	Refer to CD05.022

Relapse Name	05.034.0003	Varchar	99	Refer to CD05.019
Relapse Code	05.034.0004	Varchar	10	Refer to CD05.019
Relapse Description	05.034.0005	Varchar	254	

1.6.18. Entity: Disability

Data Elements	MDDS Codes	Data Format	Maximum Size	Code Directory
Date of Disability	05.036.0001	dd/mm/yyyy	10	Refer to G00.01
Disability Type	05.036.0002	Integer	1	Refer to CD05.022
Disability Name	05.036.0003	Varchar	99	Refer to CD05.055
Disability Code	05.036.0004	Varchar	10	Refer to CD05.055
Disability Description	05.036.0005	Varchar	200	

e- Encounter Note Object

Data Elements Labels	FHIR Label	Cardinality	Field Type	Data Format String,Varchar,Integer,Value set	Maximum Size	Applicable code directory/value set	MDDS Label	Remark
Header (Encrypted and stored) This data will be machine readable and not viewed on the screen								

Unique Health Identification Number (UHID)	Patient.identifier	1	Mandatory	Integer	12		G01.01	This will be generated once MOHFW builds the mater patient index for the country, as per NDHB we have to keep a place holder for the same. States can also build the state lever patient or citizen registry and can use that ID here and later can roll up to the central.
Alternate Unique Identification Number (UID) Type	Patient.identifier	1	Mandatory	Integer	12	CD05.007	05.002.0001	Till the time the UHID is unavailable, patient alternate id can used in place of a unique identifier. For a hospital setting it can be the patient's AADHAR number. and for those enrolled
Alternate Unique Identification Number (UID) Type	Patient.identifier	1	Mandatory	Varchar			05.002.0002	

								in vertical programs, the IDs allotted to each patient under that program can be utilized for example, NIKSHAY ID.
Facility Global Unique Identifier (GUID)	Patient.managingOrganization	1	Mandatory	Bits	16	CD05.001	05.008.0025	Custodian of patient record or the object Government is working on creating a National Facility Registry for all the healthcare facilities (Public and Private) and will generate unique facility IDs for each. This ID will come through that registry. For now states can use their own facility ID

								if they have at state level that identifies each facility uniquely in the state. (Required to be used for PMJAY
Unique Individual Health Care Provider Number	Practitioner.identifier	1	Mandatory	Varchar	18	CD05.008	05.005.0001	Similarly, as per NDHB each healthcare provider like doctor, nurse etc will have a unique identifier that will be maintained Nationally in the provider registry. A placeholder for the same is required, till then medical council number or registration number of the doctor can be used here

Clinical Document Type Code	Composition.type	1	Mandatory	Integer	2	CD05.046	05.019.0006	These will be backend values that will help to track all the clinical documents that will be generated by any application.
Document ID	Composition.identifier	1	Mandatory	Varchar	50		05.001.0023	This most of the application generates and store in their audit trail can just map with the MDDS code
Episode ID	EpisodeOfCare.identifier	1	Optional	Varchar	50		05.009.0001	Automatically generated by the system and NSF card should store this information for the encounter info they store
Episode Type	EpisodeOfCare.type	1	Optional	Integer	1	1 - New 2 - Ongoing 3 - Active 4 - Inactive	05.009.0002	

Episode Status	EpisodeOfCare.status	1	Mandatory			planned Waitlist Active On hold Finished Cancelled Entered in error		
Encounter Date	Encounter.appointment	1	Optional	G00.01			05.010.0005	Every time a new visit is created for consultation or any other service system automatically generates this to maintain the longitudinal record of a patient
Encounter ID	Encounter.identifier	1	Optional	Varchar	18		05.010.0001	
Title To be printed								
Unique Health Identification Number (UHID)	Patient.identifier	1	Optional	Integer	12	G01.01		Nationally (State level) maintained patient's health ID
Hospital's Patient ID	Condition.subject	1	Optional	Varchar	18		05.003.0001	Local Registration ID of the facility
Patient Name	Patient.name	1	Optional			G01.02	05.003.0002	Retrievable fields
Patient Age	Patient.birthDate	1	Optional	Age-year(s) (yyy)	7		05.003.0003	

				Integer(3) Age-Month(s) (mm) Integer(2) Age-Day(s) (dd) Integer (2) Default Value: 999,99,99 no preceding zero [years, months, days]				
Patient Gender	Patient.gender	1	Optional	Char	1	G01.03		
Patient Class	Encounter.class	1	Mandatory	Integer	2	CD05.047	05.003.0013	
Unique Individual Health Care Provider Number	Practitioner.identifier	1	Mandatory	Varchar	18		05.005.0001	**Auto captures as per the user log in**
Patient Address (05.003.0009)								
Patient Address Type	Address.use	1	Optional	Char	1	CD05.120	05.003.0010	**Retrievable fields**
Premises Identifier	Address.line	1	Optional	Varchar	60		G02.03-00-02	
Sub Locality-1	Address.line	1	Optional	Varchar	50		G02.03-01-03	
Locality	Address.line	1	Optional	Varchar	50		G02.03-03-03	

Land Region code	Address.country	1	Optional	Integer	State - 2 District - 3 Sub-District - 5 Village - 6 Town - 6		G02.01	
District	Address.district	1	Optional	Integer	3	CD02.03	G02.01	
Sub-District	Address.line	1	Optional	Integer	5	CD02.04	G02.02-01	
Village	Address.line	1	Optional	Integer	6		G02.01	
Town	Address.city	1	Optional	Integer		CD02.06		
State	Address.state	1	Optional	Integer	2	CD02.02		
Pin	Address.postalCode	1	Optional	Integer	6		G02.04-01	
Name of a Land region in English	Address.country	1	Optional	Varchar	50		G02.02-01	
Patient's email Address	Patient.telecom	1	Optional	Refer to Email (G00.09)			G00.09	
Patient Mobile Number	Patient.telecom	1	Optional	Char	10		05.003.0012	
Subjective Information								
Family History								
Family Member Medical History	FamilyMemberHistory	0....many	Mandatory	Varchar	4096	CD05.046	05.002.0024	
Family Member UID number	FamilyMemberHistory.identifier/ Condition.subject	0..many	Optional	G01.01			05.002.0025	

Family Member Relationship	FamilyMemberHistory.relationship	1	Mandatory	G01.08-01			05.002.0027	
Health Condition Code (Family Member)	FamilyMemberHistory.condition.code	0 to many	Mandatory	Varchar	10	ICD10/snomed/ICD11	05.020.0003	Record only there is an active condition or a notifiable or NCD history
Health Condition status	FamilyMemberHistory.condition.outcome	1	Mandatory			CD05.021	05.020.0007	
Patient's Clinical History								
Existing/comorbidity Health Condition Code	Condition.code	0 to many	Mandatory	Varchar	10	ICD10/11/SNOMED	05.020.0003	
Health Condition status	Condition.clinicalStatus	1	Mandatory			CD05.021	05.020.0007	For the next encounter all the cured and closed diagnosis will be shown here with a logic built by the healthcare facility (eg: till what date a closed diagnosis should be shown)

Past Health Condition Onset Date	Condition.onset[x]	1	Optional	Refer to Date (G00.01)	8		NA	
Chief Complaints								
Chief Complaint ID	Condition.identifier	0 to many	Mandatory	Varchar			NA	Can have more than 1 cardinality)
Chief Complaint Name	EpisodeOfCare.diagnosis.role	o to many	Mandatory	Varchar		ICD 10 (Signs & Symptoms)	NA	
Body Site	Condition.bodySite	1	Mandatory	Integer	2	CD05.026	05.023.0007	
Duration	Condition.abatement[x]	1	Mandatory	Integer			NA	
Patient Allergies								
Allergy Product Code	AllergyIntolerance.code	0 to many	Mandatory	Integer	5	CD05.018	05.018.0001	This information is collected during the first consultation, but treating doctor can add more allergies if reported by the patient or through an adverse event reported by the hospital in future.
Allergy Product Description	AllergyIntolerance.reaction.substance	0 to many	Mandatory	Varchar	99		05.018.0002	
Allergy Status	AllergyIntolerance.clinicalStatus	0 to many	Mandatory	Integer	2	CD05.021	05.018.0008	
Author Time	AllergyIntolerance.onset[x]	1	Optional	HH:MM:SS	8		05.019.0001	To be maintained internally
Author Date	AllergyIntolerance.onset[x]	1	Optional	Refer to Date (G00.01)			05.019.0002	

Author ID	AllergyIntolerance.asserter	1	Mandatory	Varchar	18		05.002.0032	Code of the Author who has authored the clinical information that need to be exchanged. E.g. provider who has authored patient discharge summary or referral notes.
Observations								
Vitals https://www.hl7.org/fhir/observation-vitalsigns.html								
Vital Sign Result Time	Observation.effective[x]	0 to many	Optional	HH:MM:SS	8		05.017.0001	
Vital Sign Result Type	Observation.category	0 to many	Optional	Integer	2	CD05.038/ https://www.hl7.org/fhir/observation-vitalsigns.html/	05.017.0002	
Vital Signs Result Status	Observation.status	0 to many	Mandatory	Integer	2	CD05.038	05.017.0003	Can be configured as per the specialty or clinical problem an application is trying to solve. A facility or department
Vital Sign Result Value	Observation.value[x]	0 to many	Optional	Varchar	20		05.017.0004	
Vital Sign Result Unit	Observation.value[x]	0 to many		Integer	2	CD05.025	05.017.0005	
Vital Sign Result Interpretation	Observation.interpretation	0 to many	Optional	Integer	2	CD05.135	05.017.0006	

Vital Sign Result Reference Range - lower limit	Observation.interpretation	0 to many	Optional	Integer	3	CD05.039	05.017.0007	can decide which vitals they would like to capture. The vital parameters are provided in the associated code directory which is provided in another excel in this folder. Each vital parameter will have cardinality 1, and is captured in every encounter.
Vital Sign Result Reference Range - Upper limit	Observation.referenceRange.high	0 to many	Optional	Integer	3	CD05.039	05.017.0008	
Vital Sign Result Date	Observation.issued	0 to many	Optional	Refer to Date (G00.01)			05.017.0009	
Vital Sign Result ID	Observation.identifier	0 to many	Optional	Integer	2		05.017.0010	
Examination								
Examination Type	Observation.category	0 to many	Optional	Integer	3	CD05.061	05.016.0001	There will be specific templates for each Type as per the medical speciality.
Examination Finding	Observation.code	0 to many	Mandatory	Varchar	4096		05.016.0002	
Examined System	BodyStructure.location	0 to many	Optional	Integer	2	CD05.033	05.016.0003	
Assessment								
Diagnosis								

Health Condition Type	Condition.code	1 to many	Mandatory	Integer	2	CD05.022	05.020.0001	
Health Condition name	Condition.code	1 to many	Mandatory	Varchar	9	CD05.019	05.020.0002	
Health Condition Code	Condition.code	1 to many	Mandatory	Varchar	10	CD05.019/ ICD10/SNOMeD	05.020.0003	Diagnosis ID
Health Condition Description	Condition.note	1 to many	Optional	Varchar	254		05.020.0004	
Health Condition Category	Condition.category	1 to many	Optional	Char	1		05.020.0005	
Diagnosis Priority	Condition.severity	1 to many	Optional	Integer	1		05.020.0006	
Present Health Condition Onset Date	Condition.onset[x]	1 to many	Optional	Refer to Date (G00.01)			05.020.0010	Auto captures date of entry
Health Condition Status	Condition.clinicalStatus	1 to many	Optional	Integer	2	CD05.021	05.020.0007	System should facilitate closure of a cured condition
Comorbidity Indicator	EpisodeOfCare.diagnosis.role	1 to many	Optional	Integer	1		05.020.0008	
Comorbidity Health Condition Code	CarePlan.supportingInfo	1 to many	Optional	Varchar	10	ICD 10/SNOMeD	05.020.0009	

Plan (Orders)								
Order Info (Applicable for all orders)								
Order Date	CarePlan.created	1	Optional	Refer to Date (G00.01)			05.023.0013	
Order Time	CarePlan.period	1		HH:MM:SS			05.023.0014	
Order Group ID	CarePlan.identifier	1	Optional	Varchar	10		05.025.0007	Applicable for composite orders or order set (since order sets are used in janta clinic flow) example annual health and wellness check up
Order ID	CarePlan.identifier	1	Optional	Varchar	12		05.025.0004	
Order Status	CarePlan.status	1	Mandatory	Char	2		05.025.0008	
Treatment Plan details (If applicable)								
Treatment plan ID /Package ID/ (Primary)	CarePlan.activity	0 to many	Optional	Integer	5		05.007.0038	Once we have standard treatment guidelines those can be used or the facility may have defined their own set of treatment plan Note: Until STGs arrives we can use package IDs for

								insurance beneficiary (With cardinality if there are more than one package applicable in case of multiple surgeries during the same patient stay or episode (two open episodes)
Lab Investigations								
Lab Order Code	DiagnosticReport.code	0 to many	Mandatory	Varchar	10	CD05.024/LOINC	05.021.0022	
Lab Order Description	DiagnosticReport.category	0 to many	Optional	Varchar	50		NA	
Lab Result ID	DiagnosticReport.result	0 to many	Optional	Varchar	10		05.021.0025	These values will be visible only when there is a follow up visit for result awaited or a follow up visit for the same episode
Result Status	DiagnosticReport.status	0 to many	Mandatory	Char	2		05.021.0004	
Result Value	DiagnosticReport.presentedForm	0 to many	Optional	Varchar	20		05.021.0005	
Result Interpretation	DiagnosticReport.conclusion	0 to many	Optional	Integer	2		05.021.0006	
Result Reference Range - lower limit	Observation.referenceRange.low	0 to many	Optional	Integer	7	CD05.039	05.021.0007	
Result Reference	Observation.referenceRange.high	0 to many	Optional	Integer	7	CD05.039	05.021.0008	

Range - Upper limit								
Radiology Investigations								
Radiology Procedure Code	Procedure.code	0 to many	Optional	Varchar	18	CD05.043	05.022.0008	
Radiology Procedure Name	Procedure.code	0 to many	Optional	Varchar	255	CD05.043	05.022.0007	
Radiology Result Status	DiagnosticReport.status	0 to many	Mandatory	Integer	2	CD05.038	05.022.0009	Applicable to follow up visit
Radiology Result ID	DiagnosticReport.identifier	0 to many	Optional	Varchar	10		05.022.0010	
scanned report attachment		0 to many						
Non-radiology Procedure Orders								
Procedure Code	Procedure.code	0 to many	Mandatory	Varchar	10	CD05.043	05.026.0003	If applicable
Procedure Name	Procedure.code	0 to many	Optional	Varchar	255	CD05.043	05.026.0001	
Rx Orders								
Prescription ID	MedicationRequest.identifier	1	Mandatory	Varchar	20		05.023.0012	
Generic Drug Code	MedicationKnowledge.code	0 to many	Mandatory	Integer	5	CD05.104	05.031.0004	
Brand Drug Code	Medication.code	0 to many	Optional	Integer	10	CD05.105	05.031.0006	
Brand Drug Name	Medication.identifier	0 to many	Mandatory	Varchar	99	CD05.105	05.031.0005	

Strength Value	Medication.ingredient.strength	0 to many	Optional	Varchar	25		05.031.0011	
Route of Administration	MedicationAdministration.dosage.route	0 to many	Optional	Varchar	6	CD05.111	05.023.0002	
Medication Frequency	MedicationAdministration.dosage.rate[x]	0 to many	Optional	Varchar	5	CD05.023	05.023.0003	
Medication Administration Interval	MedicationAdministration.dosage.rate[x]	0 to many	Optional	Varchar	40		05.023.0004	
Dose	MedicationAdministration.dosage	0 to many	Optional	Varchar	60		05.023.0005	
Medication Stopped Indicator	MedicationStatement.status	0 to many	Mandatory	Integer	1			
Medication Status	Medication.status	0 to many	Optional	Integer	2	CD05.123	05.023.0010	
Medication Fills	MedicationRequest.dispenseRequest.initialFill	0 to many	Optional	Integer	3		05.023.0019	
Medication Fill No.	MedicationRequest.dispenseRequest.numberOfRepeatsAllowed	0 to many	Optional				NA	
Quantity Ordered Value	MedicationDispense.quantity	0 to many	Optional	Integer	10		05.023.0020	
Pharmacy Units	MedicationDispense.quantity	0 to many	Optional	Varchar	25	CD05.109	05.023.0021	
Immunization Order (If applicable)								
Immunization Performer	Immunization.performer	0 to many	Optional	Varchar	18		05.024.0004	

Identification Number								
Immunization Product Code	Immunization.vaccineCode	0 to many	Mandatory	Integer	3	CD05.036	05.024.0005	
Medication Series No.	Immunization.protocolApplied.seriesDoses[x]	0 to many	Optional	Integer	2		05.024.0003	
Immunization Administered Date	Immunization.occurrence[x]	0 to many	Mandatory	G00.01			05.024.0008	
Follow Up Order								
Follow Up Date	Appointment.start	0 to many	Optional	G00.01	8		NA	
Follow up interval	Appointment.slot	0 to many	Optional				NA	
Patient Instruction	CarePlan.note	0 to many	Optional	Free Text			NA	
Author Details								
Author Date	Composition.date	1	Mandatory	G00.01			05.019.0002	Auto captured with role based access control/ Doctor's digital signature who created the encounter note
Author Time	Composition.attester.time	1	Optional	HH:MM:SS	8		05.019.0001	
Author's Digital Signature	Signature.who	1	Mandatory					