National Children's Digital Health COLLABORATIVE

National Child Digital Health Collaborative (NCDHC)

API Logical Elements 0.4

National Children's Digital Health COLLABORATIVE

Table of Contents

Document control

Key Information:

Owner	National Children's Digital Health Collaborative

Document History:

Record the history of the document, brief notes of what has changed between versions

Version No	Version Date	Author	Description
0.1	21/08/18	N.Hill	Draft in progress
0.2	22/08/18	N.Hill	Draft in progress
0.4	28/8/18	N. Hill	Draft in Progress

Document Reviewed By:

Team member other than the author should verify that the document details are correct and complete

Name	Role	Date

1 API Logical Elements

1.1 Consent

SUMMARY

Interaction Description	A request is made to query the consent status of a participant in the trial.
Notes	
Required Priority	
Questions	• Do we need to identify the person requesting the consent or is this derived from the user authentication to the hub?

Consent Payload

Logical Element	Description	Use
Consent_Type	Type of consent that is being queried. So far the following consent types have been identified: • consent from a person with parental responsibility for a newborn to have a new longitudinal record created for any newborns under their care. • Consent for a child longitudinal record recorded against the child's identity • Consent for an antenatal record to be recorded against the mother's identity	Ops
Identity (used to identify the person consent is being queried against)	The identity of the person that consent is being queried against. This is used to positively identify an individual for information flow, and not for demographics or information recording – the following types of identity use have been identified as required (in some cases the same person may be involved in different uses) being: • Child • Pregnant Woman/Mother • Person with parental responsibility for a child	Ops
Identity – Requestor (used to identify the person making the request) (is this required)	Provider/Consumer Identity used to positively identify the requestor – not for demographics information (is this required)	Provider/Consumer Identity (is this required)

National Children's Digital Health COLLABORATIVE

Consent Response

SUMMARY

Interaction Description	The CDH replies with the consent of a child
Notes	
Required Priority	
Questions	• Do we need to identify the person requesting the consent or is this derived from the user authentication to the hub?

1.2

	Description	Use

PAYLOAD

Logical Element

Consent Status	Status of the consent type for the identified person. If the person is not positively identified should return a negative consent.	Ops
Consent Type	Type of consent that has been queried. Int his interaction it will represent the consent from a person with parental responsibility for a newborn to have a new longitudinal record created for any newborns under their care.	Ops
Identity - Requestee	The identity of the person that consent has been queried against. In this interaction it will be the person with parental responsibility for the child.	Ops
Identity – Requestor (used to identify the person making the request) (is this required)	The Identity of the health provider or consumer requesting the consent status.	Ops

National Children's Digital Health COLLABORATIVE

Birth Main Payload

SUMMARY

Interaction Description	The details of a birth are provided to the Data Hub
Notes	
Required Priority	
Questions	• Is an encounter required • Is an attestation for the interaction data required (or multiple attestations for groups of data)

1.3

PAYLOAD

Logical Element	Description	Use
Date of birth	The date of birth of the baby	Clinical
Time of birth	The time of birth of the baby	Clinical
Demographic Information	Any demographic information captured at birth that will form part of the longitudinal record	Clinical
Location of birth	The place of birth (including the address and organisation name where relevant).	Clinical
Name of birth facility	The name of the birth facility	Clinical
Length of gestation	Gestational age in weeks and days (usually equivalent to length of pregnancy).	Clinical
Type of delivery	Type of delivery for the baby (normal/vaginal, vacuum extraction, breech, forceps, caesarean)	Clinical
Labour initiation	Labour initiation (spontaneous, induced (with Reason))	Clinical
Birth complications	Problems experienced by the baby during delivery e.g. cord prolapse, meconium aspiration, fetal distress etc.	Clinical
Abnormalities noted at birth	Physical problems identified with the baby at, or shortly after, birth. E.g. cleft lip/palate, extensive bruising, cephalohematoma etc.	Clinical
Vitamin K (out of scope for phase 1)	Has Vitamin K been given, if so, date for each of 3 doses; oral or injection	Clinical
HepB Immunoglobin (out of scope for phase 1)	HepB Immunoglobin given	Clinical
HepB Immunisation (out of scope for phase 1)	HepB Immunisation given, date, dose, batch, administered by	Clinical
Maternal problems in pregnancy	Maternal medical conditions or infectious diseases arising in pregnancy which may have an impact on the fetus, e.g. gestational diabetes, rubella etc.	Clinical

Individual Assessment / Observation Details (multiple entries acceptable)	Details for each individual assessment / Observation included as part of the exam / screen including.
	• Type of Assessment i.e.:
	  ○ Height / Length
	  ○ Weight
	  ○ Head Circumference
	  ○ APGAR 1 Minute
	  ○ APGAR 5 Minutes
	• Observation Method (if applicable) (what test was used to perform the Observation)
	• Observation Values (if applicable) – i.e. numerical value and type
		Clinical

	• Observation Results (if applicable) – clinical derived result specific to the observation i.e Normal, Review, Refer • Observation Notes (if applicable) – notes on the specific observation or outcome	
Identity (Parental Responsibility)	The identity of the person that holds parental responsibility for the newborn child – this is used for positive identity matching, not demographics.	Ops
Encounter (is this required??)	This is used to tie all the data components of the health interaction to a real-life interaction between the patient and a healthcare provider	Ops
Attestation (is this required??)	This is used to attest all the data as a group	Ops
Identity	This is used to positively identify the patient – it is not used as a representation of demographics	Ops
Health Interaction	This is used to indicate the type of health interaction that has taken place	Ops

National Children's Digital Health COLLABORATIVE

Newborn Discharge Main Payload

SUMMARY

Interaction Description	The details of a newborn discharge are provided to the Data Hub
Notes	
1.4 **Required Priority**	
Questions	• Is an encounter required • Is an attestation for the interaction data required (or multiple attestations for groups of data) • Do we need to include immunisations here (i.e. is the immunisation ever delayed from birth and if so should it be here or a separate immunisation interaction)

PAYLOAD

Logical Element	Description	Use
Date of discharge	The actual date of discharge.	Clinical
Admissions	Baby's admission to Special Care Nursery or ICU	Clinical
Age at Discharge	Baby's age at Discharge	Clinical
Family History	Record of family history (eg deafness)	Clinical

Individual Observation Details (multiple entries acceptable) – With Measures/Results if Applicable	Details for each Observation including.
	• Type of Observation i.e.:
	  ○ Height / Length
	  ○ Weight
	  ○ Head Circumference
	  ○ Feeding Status
	• Observation Method (if applicable) (what test was used to perform the Observation)
	• Observation Values (if applicable) – i.e. numerical value and type
	• Observation Results (if applicable) – clinical derived result specific to the observation i.e Normal, Review, Refer
	• Observation Notes (if applicable) – notes on the specific observation or outcome
		Clinical

Encounter (is this required??)	This is used to tie all the data components of the health interaction to a real-life interaction between the patient and a healthcare provider	Ops
Attestation (is this required??)	This is used to attest all the data as a group	Ops
Identity	This is used to positively identify the patient – it is not used as a representation of demographics	Ops
Health Interaction	This is used to indicate the type of health interaction that has taken place	Ops

National Children's Digital Health COLLABORATIVE

Assessment/Observation Main Payload

SUMMARY

Interaction Description	Any screening / assessment/observation details including outcomes are uploaded to the Hub.
Notes	
Required Priority	
Questions	• Is an encounter required • Is an attestation for the interaction data required (or multiple attestations for groups of data)? • Should we include the location of the assessment • Should we include an option to record a general outcome of the screening • Should we include an option to record general notes for the screening • Can the assessment/observation type by combined with the interaction type? • Do we need to include name or does a positive identity match perform this function in an electronic system? • Do we need to include age or can this be calculated from DOB that all systems should have? • Do we need to include DOB in this interaction as systems should already know it? • Do we need to include sex in the specific assement record or is the representation in the demographics enough (what about sex changes?) – the sex in not in all harmonised health checks) •

1.5

PAYLOAD

Logical Element	Description	Use
Date of Activity	The date on which the Activity was performed	Clinical
Identity (Performer)	Details of the provider/consumer who performed the activity (including name and role or positive identity match)	Clinical
Location of Activity (not included in harmonised data)	The location the Activity took place	Clinical

Individual Observation Details (multiple entries acceptable) – With Measures/Results if Applicable	Details for each Observation including.
	• Type of Observation i.e.:
	  ○ Head and Fontanelles
	  ○ Eyes (Right and Left)
	  ○ Ears (Right and Left)
	  ○ Mouth / Palate
	  ○ Cardiovascular / heart
	  ○ Femoral pulses (right and Left)
	  ○ Respiratory Rate
	  ○ Abdomen & Umbilicus
	  ○ Anus
	  ○ Genitalia
	  ○ Testes fully Descended (if applicable) (Right and Left)
	  ○ Musculo-skeletal
	  ○ Limbs & Spine
	  ○ Hips / Gait
	  ○ Skin
	  ○ Reflexes / Neurological
	• Observation Method (if applicable) (what test was used to perform the Observation)
		Clinical

	• Observation Values (if applicable) – i.e. numerical value and type • Observation Results (if applicable) – clinical derived result specific to the observation i.e Normal, Review, Refer • Observation Notes (if applicable) – notes on the specific observation or outcome	
Assessment/Observation Outcome (if applicable – not from harmonised data)	• Details on the outcome for the entire Assessment/Observation if applicable (i.e. Normal, Review, Refer)	Clinical
Assessment/Observation Notes (not from harmonised data)	Notes regarding the Assessment/Observation	Clinical
Encounter (is this required??)	This is used to tie all the data components of the health interaction to a real-life interaction between the patient and a healthcare provider	Ops
Attestation (is this required??)	This is used to attest all the data as a group	Ops
Identity	This is used to positively identify the patient – it is not used as a representation of demographics	Ops
Health Interaction	This is used to indicate the type of health interaction that has taken place	Ops
Assessment/Observation Type	What was the type of assessment/observation i.e: • Birth – 4 Weeks Health Check • 6 – 8 Weeks Health Check • 4-9 Months Health Check • 12 Months Health Check • 18 Months Health Check • 2 Years Health Check • 3 Years Health Check • 4 Years Health Check • Newborn Assessment • Newborn Hearing Screen • Consumer Entered Milestone • Clinically Entered Observation • Consumer Entered Observation	Ops

Notification Main Payload

SUMMARY

Interaction Description	The Hub send a notification to a clinician / consumer
Notes	
Required Priority	
Questions	• Is an encounter required •

1.6

PAYLOAD

Logical Element	Description	Use
Identity	This is used to positively identify the patient – it is not used as a representation of demographics	Ops
Notification	This is used to indicate there is a notification message and indicate the type of notification.	Ops
Encounter (is this required??)	This is used to tie all the data components of the health interaction to a real life interaction between the patient and a healthcare provider or system	Ops

National Children's Digital Health COLLABORATIVE

Family History Main Payload

SUMMARY

Interaction Description	Any family history details are uploaded to the Hub.
Notes	
1.7 **Required Priority**	
Questions	• Is an encounter required • Is an attestation for the interaction data required (or multiple attestations for groups of data)? •

PAYLOAD

Logical Element	Description	Use
Date of Activity	The date on which the Activity was performed	Clinical
Identity (Performer)	Details of the provider/consumer who performed the activity (including name and role or positive identity match)	Clinical
Location of Activity (not included in harmonised data)	The location the Activity took place	Clinical
Family History Details	Details for each family history item including: • The condition or diagnosis • The relationship of the person with the condition to the child.	Clinical
Encounter (is this required??)	This is used to tie all the data components of the health interaction to a real-life interaction between the patient and a healthcare provider	Ops
Attestation (is this required??)	This is used to attest all the data as a group	Ops
Identity	This is used to positively identify the patient – it is not used as a representation of demographics	Ops
Health Interaction	This is used to indicate the type of health interaction that has taken place	Ops

National Children's Digital Health COLLABORATIVE

Clinical Encounter Main Payload

SUMMARY

Interaction Description	Details of a clinical encounter (consumer or clinically entered) are uploaded to the hub)
Notes	
Required Priority	
Questions	• Is an attestation for the interaction data required (or multiple attestations for groups of data)? • Do we need to record the reason for presentation and who recorded the presentation • Do we need to allow for notes on presentation to be recorded • Is encounter required

1.8

PAYLOAD

Logical Element	Description	Use
Date of Activity	The date on which the Activity was performed (i.e. when was the encounter)	Clinical
Identity (Recorder)	Details of the provider/consumer/orginisation who recorded the activity (including name and role or positive identity match)	Clinical
Location of Activity	The location the Activity took place (i.e. where was the encounter)	Clinical
Encounter (is this required??)	This is used to tie all the data components of the health interaction to a real-life interaction between the patient and a healthcare provider	Ops
Attestation (is this required??)	This is used to attest all the data as a group	Ops
Identity	This is used to positively identify the patient – it is not used as a representation of demographics	Ops
Health Interaction	This is used to indicate the type of health interaction that has taken place	Ops
Notes on Presentation	Any notes regarding the presentation (perhaps in a future phase we should allow a consumer to enter notes on the reason for a presentation	Clinical
Reason for Presentation	Why the presentation occurred	Clinical

National Children's Digital Health COLLABORATIVE

Subscription Main Payload

SUMMARY

Interaction Description	A provider or consumer changes or queries their subscriptions
Notes	
Required Priority	
Questions	•

1.9

PAYLOAD

Logical Element	Description	Use
Identity (if applicable)	This is used to positively identify the patient – it is not used as a representation of demographics. In this interaction it is used to identify the patient that is being subscribed to	Ops
Identity (subscriber)	This is used to identify the consumer, provider or provider organisation that is subscribing or unsubscribing to the health interaction	Ops
Health Interaction Type	This is used to indicate the type of health interaction that is being subscribed to	Ops
Encounter (is this required??)	This is used to tie all the data components of the health interaction to a real life interaction between the patient and a healthcare provider or system	Ops
Subscription Operation	This is used to identify if the person wishes to subscribe/unsubscribe or query their subscription type.	Ops

National Children's Digital Health COLLABORATIVE

Consent Update Main Payload

SUMMARY

Interaction Description	A provider or consumer changes the consent of a consumer
Notes	
Required Priority	
Questions	• Is encounter required • Is attestation required?

PAYLOAD

Logical Element	Description	Use
Identity	This is used to positively identify the consumer that consent is being provided against– it is not used as a representation of demographics. In this interaction it is used to identify the patient that is being subscribed to	Ops
Identity (Consent Giver)	This is used to positively identify the person that is giving consent is being provided against– it is not used as a representation of demographics. In this interaction it is used to identify the patient that is being subscribed to	
Identity (Recorder)	This is used to identify the person or organisation who recorded the consent– it is not used as a representation of demographics. In this interaction it is used to identify the patient that is being subscribed to	Ops
Health Interaction Type	This is used to indicate the type of health interaction that is being subscribed to	Ops
Encounter (is this required??)	This is used to tie all the data components of the health interaction to a real life interaction between the patient and a healthcare provider or system	Ops
Consent Type	This is used to indicate the type of consent that is given. i.e.: • Mother consents to a longitudinal record being created for her child when it is born • Consent for a longitudinal record to be used for a born child. • Consent for a longitudinal record to be used for a pregnant woman	Ops
Demographic Information (if applicable)	Any demographic information required to form part of a longitudinal record if a new one is being created. In the case of an expectant mother this is the mother's details as the record is against the mother.	Clinical

View Longitudinal Record

TBC

1.11