



National Children's
Digital Health
COLLABORATIVE

National Child Digital Health Collaborative (NCDHC)

INFORMATION ELEMENT MODELLING 0.2

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1 Health Interaction to Element Components

ET1 Birth

SUMMARY

1.1

Interaction Description	A child is born, including the details of the birth
Trigger	The creation of a newborn Birth Details record
Notes	
Required Priority	
Questions	•

API Model	2 - To Hub - With Consent Check
Consent Payload	Consent
Consent Response	Consent Response
Main Payload	Birth Main Payload
Main Response	?

ET1.2 Newborn Birth Discharge

SUMMARY

1.2

Interaction Description	A newborn child is discharged from care
Trigger	The creation of an infant discharge summary
Notes	
Required Priority	
Questions	<ul style="list-style-type: none"> 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)
API Model	2 - To Hub - With Consent Check
Consent Payload	Consent
Consent Response	Consent Response
Main Payload	Newborn Discharge Main Payload
Main Response	?

ET2 Newborn Examination (Assessment)

SUMMARY

1.3

Interaction Description	A newborn examination has been completed with an outcome recorded
Trigger	The creation of a newborn examination record (observations and measurements with a newborn observation) with an outcome (e.g. normal , review or refer)
Notes	It does not appear that NSW Health electronically captures the newborn exam results only that it has been performed. Suggest for phase one the model has flexibility to capture individual results and also just indicate if the exam has been completed. Also how do we define a completed exam (is it the completion of each assessment type or a clinician indication that they have done the exam. NB. I believe a NSW Health clinician indicates they have completed the exam electronically even if parts of it need to be completed elsewhere as it is more of a workflow check than a clinical note – this needs to be validated)
Required Priority	
Questions	<ul style="list-style-type: none"> • Should we expand the definition of this interaction to capture the undertaking of an examination where we do not electronically record the outcome • 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

API Model	2 - To Hub - With Consent Check
Consent Payload	Consent
Consent Response	Consent Response
Main Payload	Assessment/Observation Main Payload
Main Response	?

ET2 Newborn Examination (Assessment) Missed

SUMMARY

1.4

Interaction Description	A newborn examination has not conducted
Trigger	The absence of a newborn examination record
Notes	
Required Priority	
Questions	
API Model	3 – From Hub
Consent Payload	N/A
Consent Response	N/A
Main Payload	Notification Main Payload
Main Response	?

ET3.3 Newborn Screening

SUMMARY

1.5

Interaction Description	A newborn screening has been completed with an outcome recorded
Trigger	The creation of a newborn screening record with an outcome (e.g. normal , review or refer)
Notes	
Required Priority	
Questions	<ul style="list-style-type: none"> Should we include the location of the screening

API Model	2 - To Hub - With Consent Check
Consent Payload	Consent
Consent Response	Consent Response
Main Payload	Assessment/Observation Main Payload
Main Response	?

ET3.3 Newborn Screening Missed

SUMMARY

1.6

Interaction Description	A newborn screening has not been conducted
Trigger	The absence of a screening record (need to define the screening records to check for in business rules) and define the trigger more clearly
Notes	
Required Priority	
Questions	<ul style="list-style-type: none"> Can this be moved into a more generic notification event or de we call out specific clinical requirements here Is encounter required

API Model	3 – From Hub
Consent Payload	N/A
Consent Response	N/A
Main Payload	Notification Main Payload
Main Response	?

ET5 Family History Clinician Entered

SUMMARY

1.7

Interaction Description	A family history has been entered by a registered clinician
Trigger	The creation or update of a family history record in a clinical system
Notes	
Required Priority	
Questions	<ul style="list-style-type: none"> Is an encounter required Is an attestation for the interaction data required?

API Model	2 - To Hub - With Consent Check
Consent Payload	Consent
Consent Response	Consent Response
Main Payload	Assessment/Observation Main Payload
Main Response	?

ET7 Consumer Entered Milestone

SUMMARY

1.8

Interaction Description	An achievement or milestone is observed and recorded by a carer or parent
Trigger	The creation of a record with a consumer relevant milestone or observation
Notes	
Required Priority	
Questions	<ul style="list-style-type: none">• Is an encounter required• Do we need the consent element for consumer entered data or is this managed in the authorisation layer?•

API Model	1 - To Hub - No Consent Check
Consent Payload	N/A
Consent Response	N/A
Main Payload	Assessment/Observation Main Payload
Main Response	?

ET8.2 Health Check Assessment

SUMMARY

1.9

Interaction Description	A child health assessment has taken place
Trigger	The creation of a health assessment record in a CIS, practice management or community health system
Notes	This Health Interaction represents the actual assessment component of a health check. The Questionnaire and other parts of the check are included in other interactions that are not included in the first release of the NCDHC solution.
Required Priority	
Questions	<ul style="list-style-type: none"> • Is an encounter required • Do we need a health interaction type or can it be deduced from the other elements? • Is an attestation for the interaction data required? • Should the inclusion of date of assessment be mandatory (it is only included in some of the harmonised health checks)? • Should the inclusion of performing professional be mandatory (it is only included in some of the harmonised health checks)? • 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 assessment record or is the representation in the demographics enough (what about sex changes?) – the sex is not in all harmonised health checks) • Is the Fontanelles / Sutures assessment the same as the newborn head / Fontanelles assessment • Should we mandate the recording of all the elements per each health check (if so we need to split into separate interactions) or do we make all optional? If all optional can we represent as a general screening interaction? • What is the development assessment referred to in the harmonised data? • Do we need age appropriate immunisations, or will this move to a calculated item that we do not collect and expose via AIR data?? • What is the oral health assessment? • What is the deworming item (is it an assessment/observation if they have been administered the deworming medicine or is it a record of the administration of the deworming medicine) if it is an administration should it move into a vaccination/immunisation/medication health interaction that will be more tailored for the dispense and administration of medicines) • What is the fluoride varnish item (is it an assessment/observation if they have been administered fluoride varnish or is it a record of the administration of the fluoride varnish) if it is an administration should it move into a vaccination/immunisation/medication health interaction that will be more tailored for the dispense and administration of medicines) • Do we need to record the BMI or do we include as a calculated value when showing the results? • Vision screen and Hearing screen are introduced at the 4 year health check. Are these the same as the eyes and ears check or different? • At the 4 year health check eyes right/left are included along with eyes (vision tested monocularly) right / left). What is the difference in how this is clinically recorded. Is it just a matter of having three assessments – one for both eyes, one for right eye and one for left eye or is it something else? • What is the results vision chart? Is this the same as vision screen?

API Model	2 - To Hub - With Consent Check
Consent Payload	Consent
Consent Response	Consent Response
Main Payload	Assessment/Observation Main Payload
Main Response	?

ET9 Child Presented in Emergency Notification

SUMMARY

1.10	Interaction Description	A child has presented in an emergency department
	Trigger	The creation of an emergency presentation record in a clinical EMR or PAS
	Notes	
	Required Priority	
	Questions	<ul style="list-style-type: none"> • Can we combine this into a generic clinical encounter health interaction? • Do we need a health interaction type, or can it be deduced from the other elements • 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

API Model	2 - To Hub - With Consent Check
Consent Payload	Consent
Consent Response	Consent Response
Main Payload	Clinical Encounter Main Payload
Main Response	?

ET10.1 Consumer Entered Encounter

SUMMARY

Interaction Description	A clinical encounter has occurred and is recorded by a consumer, e.g. a GP appointment, hospital appointment, hospital admission, etc.
Trigger	The creation of a clinical encounter or episode via the consumer app
Notes	
Required Priority	
Questions	<ul style="list-style-type: none"> • Can we combine this into a generic clinical encounter health interaction? • Do we need a health interaction type, or can it be deduced from the other elements • Do we need to record the reason for presentation and who recorded the presentation • Do we need the consent element for consumer entered data or is this managed in the authorisation layer? • Is encounter required

API Model	1 - To Hub - No Consent Check
Consent Payload	N/A
Consent Response	N/A
Main Payload	Clinical Encounter Main Payload
Main Response	?

ET10.2 Clinician (Jurisdiction) Entered Encounter

SUMMARY

Interaction Description	A clinical encounter has occurred and recorded by a clinician (jurisdictional), e.g. a hospital outpatient, hospital admission, etc.
Trigger	The creation of an admission / episode record in a (jurisdictional) clinical EMR or community health system
1.1: Notes	
Required Priority	
Questions	<ul style="list-style-type: none"> • Can we combine this into a generic clinical encounter health interaction? • Why is this specific to a jurisdiction. Is it because we are only planning to record jurisdictional encounters in phase 1 of the NCDHC program. If so should we model the interaction for all providers and only implement for jurisdictions? • Do we need a health interaction type, or can it be deduced from the other elements • 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?
API Model	2 - To Hub - With Consent Check
Consent Payload	Consent
Consent Response	Consent Response
Main Payload	Clinical Encounter Main Payload
Main Response	?

ET13 Parental Observation

SUMMARY

1.13

Interaction Description	An observation (e.g. height, weight or head circumference) or measurement has been recorded
Trigger	The creation of an observation event by a parent/carer
Notes	
Required Priority	
Questions	<ul style="list-style-type: none"> Do we need a health interaction type or can it be deduced from the other elements Can this be combined with a more generic screening and observation health interaction Why is there a separate parental and clinical observation (can they be combined) Do we need the consent element for consumer entered data or is this managed in the authorisation layer? Is encounter required?

API Model	1 - To Hub - No Consent Check
Consent Payload	N/A
Consent Response	N/A
Main Payload	Assessment/Observation Main Payload
Main Response	?

ET13.1 Clinician Observation

SUMMARY

1.14

Interaction Description	An observation (e.g. height, weight or head circumference) or measurement has been recorded
Trigger	The creation of an observation event by a healthcare provider
Notes	
Required Priority	
Questions	<ul style="list-style-type: none"> • Do we need a health interaction type or can it be deduced from the other elements • Can this be combined with a more generic screening and observation health interaction • Why is there a separate parental and clinical observation (can they be combined) • Is encounter required? • Is attestation of the interaction required?

API Model	2 - To Hub - With Consent Check
Consent Payload	Consent
Consent Response	Consent Response
Main Payload	Assessment/Observation Main Payload
Main Response	?

ET17.4 Upcoming Scheduled Notification

SUMMARY

Interaction Description	An appointment reminder based on a harmonised schedule (e.g. immunisations & health checks)
Trigger	Based on the age of child, today's date and harmonised health check schedule, trigger a reminder notification for consumer app
1.1: Notes	
Required Priority	
Questions	<ul style="list-style-type: none"> Can this be moved into a more generic notification event or do we call out specific clinical requirements here Is encounter required

API Model	3 – From Hub
Consent Payload	N/A
Consent Response	N/A
Main Payload	Notification Main Payload
Main Response	?

ET23 Subscribe to Health Interaction

SUMMARY

1.10	Interaction Description	A clinician subscribes to a health interaction
	Trigger	A subscription record is created for a health interaction (this is probably incorrect - Perhaps that a clinician requests to unsubscribe from an interaction as the local system will not keep records)
	Notes	
	Required Priority	
	Questions	<ul style="list-style-type: none"> Can we combine subscribe/unsubscribe into a single interaction? Is encounter required What is the trigger

API Model	1 - To Hub - No Consent Check
Consent Payload	N/A
Consent Response	N/A
Main Payload	Subscription Main Payload
Main Response	?

ET23.1 Consent to Participate

SUMMARY

1.1	Interaction Description	A consumer consents to be part of the longitudinal child health record program
	Trigger	A consumer consent record is created for the Child Health Record initiative (this is probably incorrect - Perhaps that a clinician or consumer requests to consent. The creation of a consent record is the action not the trigger)
	Notes	
	Required Priority	
	Questions	<ul style="list-style-type: none"> • Can we combine consent and withdraw consent into a single interaction? • Is encounter required • Is attestation required? • Do we need a consumer entered consent (i.e. consumer can consent via the app) – perhaps for a future phase
API Model		1 - To Hub - No Consent Check
Consent Payload		N/A
Consent Response		N/A
Main Payload		Consent Update Main Payload
Main Response		?

ET23.2 Un-Subscribe to Health Interaction

SUMMARY

1.18	Interaction Description	A clinician unsubscribes to a health interaction
	Trigger	A subscription record is removed for a health interaction (this is probably incorrect - Perhaps that a clinician requests to unsubscribe from an interaction as the local system will not keep records)
	Notes	
	Required Priority	
	Questions	<ul style="list-style-type: none"> • Can we combine subscribe/unsubscribe into a single interaction? • Is encounter required • What is the trigger

API Model	1 - To Hub - No Consent Check
Consent Payload	N/A
Consent Response	N/A
Main Payload	Subscription Main Payload
Main Response	?

ET23.3 Withdrawal Consent to Participate

SUMMARY

1.19

Interaction Description	A consumer withdraws their consents to be part of the longitudinal child health record program
Trigger	A consumer withdrawal record is created for the Child Health Record initiative (this is probably incorrect - Perhaps that a clinician or consumer requests to consent. The creation of a consent record is the action not the trigger)
Notes	
Required Priority	
Questions	<ul style="list-style-type: none"> • Can we combine consent and withdraw consent into a single interaction? • Is encounter required • Is attestation required? • Do we need a consumer entered consent (i.e. consumer can consent via the app) – perhaps for a future phase

API Model	1 - To Hub - No Consent Check
Consent Payload	N/A
Consent Response	N/A
Main Payload	Consent Update Main Payload
Main Response	?

ET23.4 View of Subscriptions

SUMMARY

1.20	Interaction Description	A clinician can view a list the health interactions they have subscribed to view
	Trigger	A clinician views the health interactions they have previously made subscription to (this is probably incorrect - Perhaps that a clinician requests to views the health interactions they have previously made subscription to)
	Notes	
	Required Priority	
	Questions	<ul style="list-style-type: none"> • Is encounter required • What is the trigger • Orchestration question. If a patient removes consent for a provider to view a record (either by withdrawing consent to participate in the program or by using some more granular model hat we introduce later how will we deal. (will we: <ul style="list-style-type: none"> ○ automatically remove all subscriptions regarding that patient (if they then re-give consent the providers will have to resubscribe. ○ Keep the subscriptions in place (and perhaps hide them from clinicians) so if the patient re-provides consent the subscriptions are in place ○ Some other model)
API Model		1 - To Hub - No Consent Check
Consent Payload		N/A
Consent Response		N/A
Main Payload		Subscription Main Payload
Main Response		?

ET23.5 View Longitudinal Record

TBC

1.21